1962 ANNUAL MEETING · CHICAGO · SEPT. 17-20

HOSPITALS

JOURNAL OF THE
AMERICAN
HOSPITAL
ASSOCIATION

DECEMBER 16, 1961

INCLUDING ANNUAL INDEX

CARING FOR RESEARCH ANIMALS IN HOSPITAL LABORATORIES

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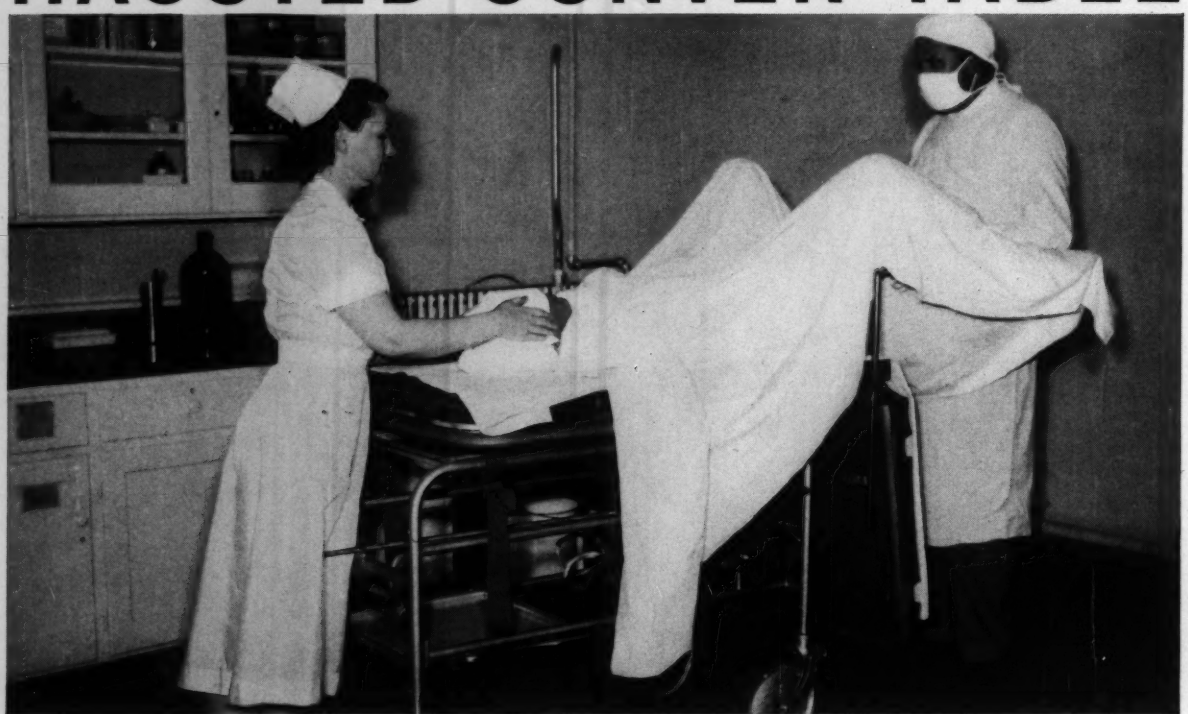
HAUSTED CONVER-TABLE



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Basically, the Conver-Table is a wheel stretcher, but it converts instantly to a portable examining table. Its many uses enable it to replace several pieces of equipment.

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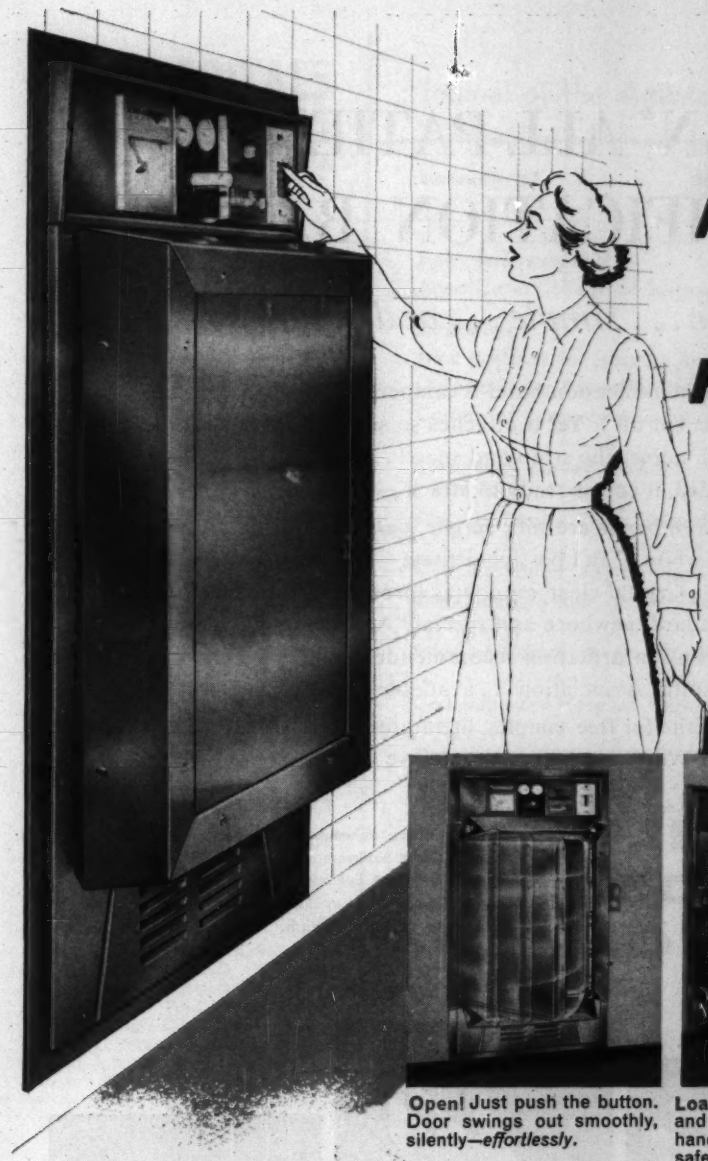
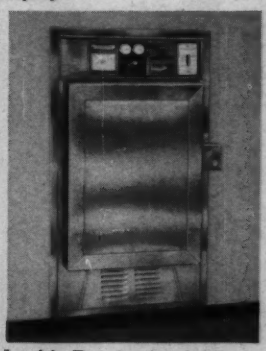


Open! Just push the button. Door swings out smoothly, silently—*effortlessly.*

Load! New LoadMaster Car and Safe-T-Lock Carriage handle larger loads, more safely.



Lock! Touch the button—door swings shut, locks safely, starts sterile cycle. No handwheel to wrestle with.

SAFER . . . Just a touch of a button closes and locks the door. Steam tight seal is automatic—regardless of the operator's strength. And three separate features make it impossible to open the door under pressure.

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MORE CAPACITY . . . New design of vessel and car increases load capacity. And improved exchange of air and steam reduces cycle time—particularly advantageous with high vacuum techniques.

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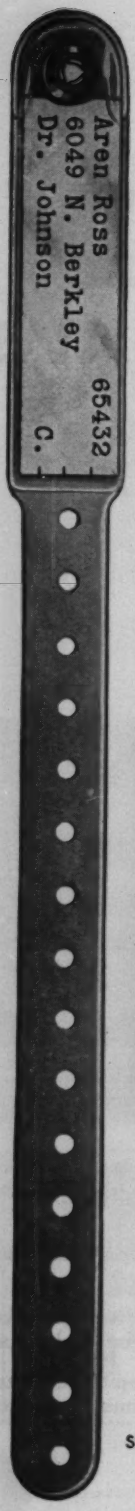

Standard or "Addressograph"

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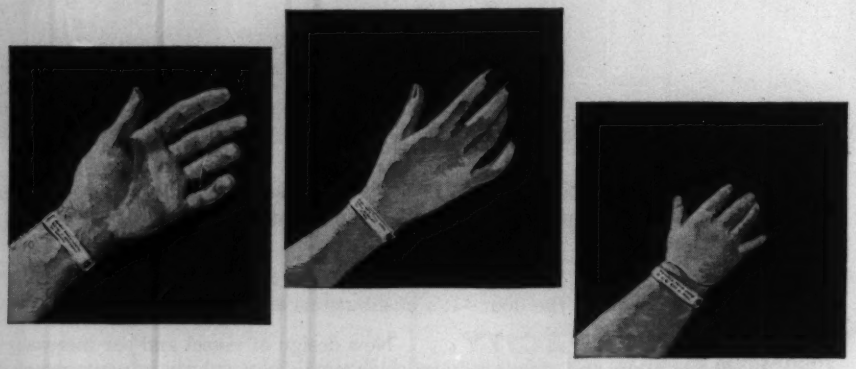

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HOSPITALS

Journal of the American Hospital Association

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Clean, spacious cages and proper handling by trained technicians contribute to the well being of laboratory animals. An article discussing adequate facilities for and proper care of research animals in hospital laboratories begins on page 43. Cover photo and photos with the article courtesy of the University of California. (Other picture credits are on page 107.)

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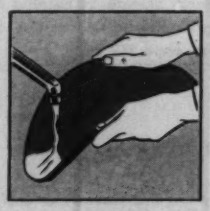

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hospital association meetings

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NATIONAL MEETINGS

1962

Jan. 31-Feb. 1—**Midyear Conference of Presidents and Secretaries,** Chicago (AHA Headquarters)

Sept. 17-20—**64th Annual Meeting,** Chicago (McCormick Place)

MEETING AND INSTITUTE

CALENDAR

THROUGH MAY 1962

(American Hospital Association Institutes are in BOLDFACE type. Meetings of other hospital associations are in LIGHTFACE type. ***Other organizations in the health field are shown in ITALICS.)***

DECEMBER

26-31 ***American Association for the Advancement of Science,*** Denver (Denver Hilton)

JANUARY

8-12 **Dietary Department Administration,** Pittsburgh (Webster Hall Hotel)

15-18 ***American Osteopathic Association,*** Las Vegas (Convention Center)

17-19 Alabama Hospital Association, Mobile (Admiral Semmes Hotel)

22-24 ***National Association of Private Psychiatric Hospitals,*** Sarasota, Fla. (Colony Beach Resort)

22-26 **Nursing Service Administration,** Memphis, Tenn. (Claridge Hotel)

26 South Carolina Hospital Association, Columbia (Wade Hampton Hotel)

31-Feb. 1 **American Hospital Association Midyear Conference of Presidents and Secretaries,** Chicago (AHA Headquarters)

FEBRUARY

1-3 ***American College of Hospital Administrators Congress on Administration,*** Chicago (Morrison Hotel)

5-9 **Nursing Service Administration,** San Francisco (Sheraton-Palace Hotel)

5-9 **Special Institute for Medical Record Librarians on Organization and Management,** Chicago (AHA Headquarters)

12-14 **Budgeting,** Chicago (AHA Headquarters)

19-21 **Personnel Administration (Advanced),** Louisville, Ky. (Kentucky Hotel)

26-March 2 ***American Protestant Hospital Association,*** Chicago (Morrison Hotel)

MARCH

5-8 **Emergency Room Nursing Service Management (Tentative),** Chicago (AHA Headquarters)

12-14 **Directors of Hospital Volunteers (Advanced),** Chicago (AHA Headquarters)

13-16 **Hospital Purchasing (Advanced),** Baton Rouge, La. (Capitol House Hotel)

14-16 Louisiana Hospital Association, Baton Rouge (Capitol House Hotel)

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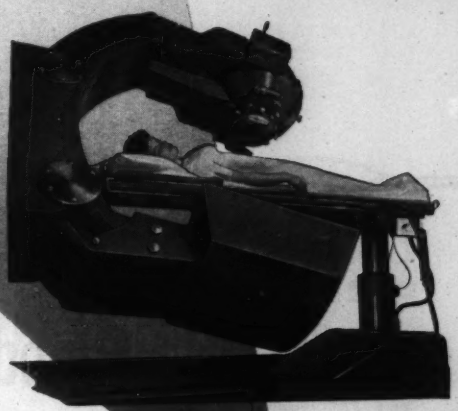

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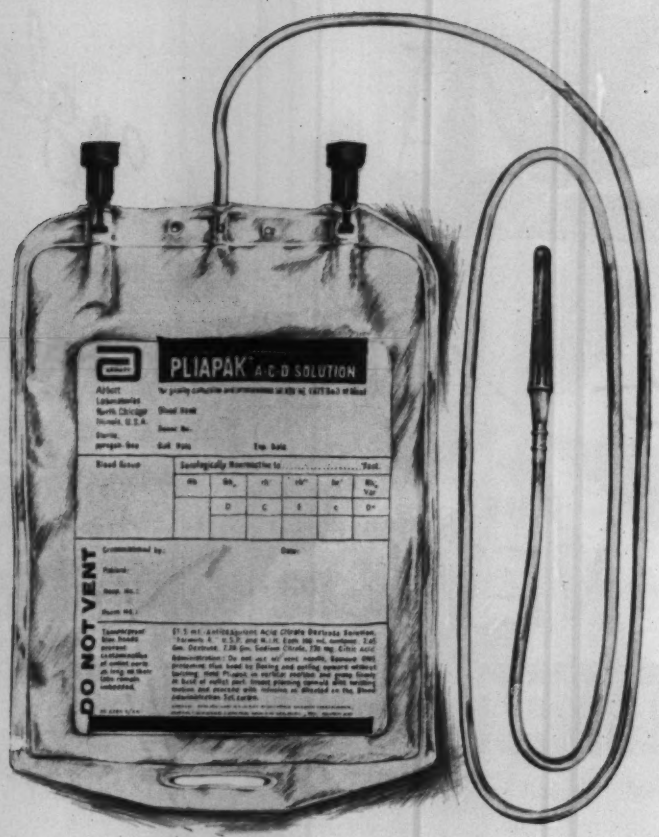

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- **An extra-long collection set** (40 inches) provides more leeway for suspending, knotting, and cross-match sampling.
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- **A roomy new label** gives you better space and organization for recording the necessary data.

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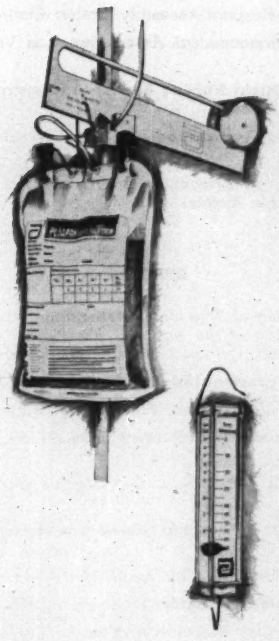

COLLECTION

Abbott's BLOOD COLLECTION BALANCE features a new positive cut-off action. When full weight of blood is drawn, counterweight rolls to the other end of beam, instantly stopping collection. Calibrated for use with the 500-ml. and 250-ml. sizes of Pliapak, the Double Pliapak, and others.

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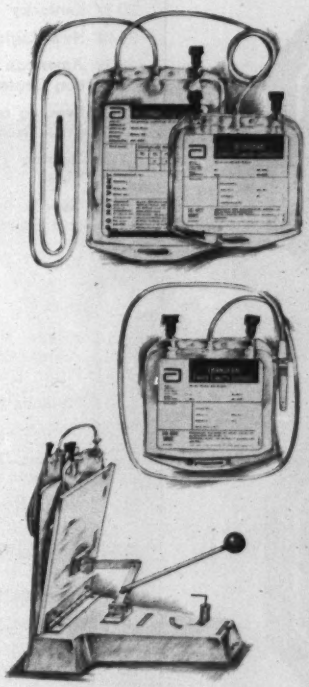

TRANSFER

The DOUBLE PLIAPAK is the bag of choice where preparation of blood fractions or splitting of units is planned in advance. It provides a closed system: a 500-ml. Pliapak attached by a tubing to a 300-ml. plastic container.

The TRANSPAK® is Abbott's empty plastic bag for easy transfer, storage, and administration of blood fractions from the Pliapak. Equally useful for transfer of partial units. 500-, 300-, and 150-ml. sizes.

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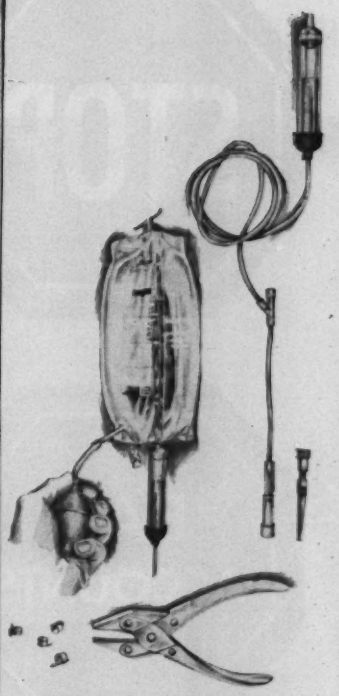

ADMINISTRATION

The Pliapak PRESSURE UNIT is a convenient and relatively low-cost way to speed administration. Simply suspend the filled Pliapak inside the sleeve; the latter is then inflated as desired. No air enters the Pliapak. Though intended as a disposable unit, it is often reusable.

Abbott supplies a wide variety of BLOOD ADMINISTRATION SETS, including primary, secondary, Y-type, inline blood pumps, pediatric and controlled volume sets—and with or without needles.

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watch for these eight danger signals:

1. Hospital payment terms fail for no valid reason.
2. Denial of responsibility.
3. Patient "skips" town.
4. Repeated unreasonable complaints.
5. Obvious financial irresponsibility.
6. History of repeated delinquencies with frequent change of address or of occupation.
7. Delinquency co-exists with serious marital difficulty.
8. Delinquent debtor doesn't answer mail or phone.

All of these signals are described in detail in "The Creditors Collection Guide", published by the American Collectors Association. For your free copy of this handy 24-page guide, call your local ACA office listed under "Collection Agencies" in the Yellow Pages, or write to the address below.

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An International Association of Collection Specialists

15 Wisconsin Hospital Association, Milwaukee (Schroeder Hotel)

19-21 **Labor Relations,** Chicago (AHA Headquarters)

20-22 Kentucky Hospital Association, Louisville (Kentucky Hotel)

26-28 New England Hospital Assembly, Boston (Statler-Hilton Hotel)

26-29 ***American Pharmaceutical Association,*** Las Vegas (Convention Center)

26-29 **Evening and Night Nursing Service Administration,** Chicago (AHA Headquarters)

27-29 **Nursing Home Administration,** Miami Beach, Fla. (Seville Hotel)

30-31 Georgia Hospital Association, Jekyll Island, Ga. (Buccaneer and Holiday Inn Motels)

APRIL

1-6 ***Annual Meeting of Blue Cross Association Members and the Annual Meeting of the National Association of Blue Shield Plans,*** Colorado Springs, Colo. (Broadmoor Hotel)

2-4 **Methods Improvement (Advanced),** Baltimore (Emerson Hotel)

2-5 Ohio Hospital Association, Toledo (Toledo Sports Arena)

9-13 **Staffing Departments of Nursing Units,** Chicago (AHA Headquarters)

11-12 Iowa Hospital Association, Des Moines (Fort Des Moines Hotel)

12-13 Carolina-Virginias Hospital Conference, Roanoke, Va. (Hotel Roanoke)

16-20 **Hospital Engineering,** Chicago (AHA Headquarters)

23-25 **Hospital Trustees (Tentative),** Chicago (AHA Headquarters)

25-27 Midwest Hospital Association, Kansas City, Mo. (Municipal Auditorium)

25-27 Southeastern Hospital Conference, New Orleans (Municipal Auditorium)

30-May 2 Tri-State Hospital Assembly, Chicago (Palmer House)

30-May 3 **Obstetrical Nursing Service Administration,** Buffalo, N.Y. (Statler-Hilton Hotel)

MAY

1 Massachusetts Hospital Association, Boston (Statler-Hilton Hotel)

7-9 **Machine Accounting and Data Processing,** Chicago (AHA Headquarters)

7-10 Association of Western Hospitals, Portland, Ore. (Memorial Coliseum)

7-11 **Dietary Department Administration,** Denver (Cosmopolitan Hotel)

9-11 Upper Midwest Hospital Conference, Minneapolis (Auditorium)

9-13 ***Student AMA,*** Washington (Mayflower Hotel)

13-16 Texas Hospital Association, Houston (Shamrock Hilton Hotel)

14-16 **Hospital Law,** Philadelphia (Marriott Motor Hotel)

14-16 **Supervision,** Chicago (AHA Headquarters)

14-17 **Hospital Dental Service (Basic),** Detroit (Harlan House Motor Hotel and Henry Ford Hospital)

14-18 ***American Nurses Association,*** Detroit (Cobo Hall)

21-23 **Hospital Housekeeping (Basic),** Chicago (AHA Headquarters)

21-23 **Occupational Therapists,** (Cleveland Statler Hotel)

21-24 Catholic Hospital Association, St. Louis (Kiel Auditorium)

23 New Jersey Hospital Association, Atlantic City (Convention Hall)

23-25 Middle Atlantic Hospital Assembly, Atlantic City (Convention Hall)

23-25 Hospital Association of New York State, Atlantic City (Claridge Hotel)

23-25 Hospital Association of Pennsylvania, Atlantic City (Convention Hall)

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References: 1. Fell, E. H.: *Am. J. Surg.* 99:265, March, 1960. 2. Bettley, F. R.: *Brit. M.J.* 1.1675, June 4, 1960. 3. Hardyment, A. F.; Wilson, R. A.; Cockcroft, W., and Johnson, Betty: *Pediatrics* 25:907, May (Pt. II), 1960. 4. Editorial, *Canad. M.A.J.* 83:1112, Nov. 19, 1960. 5. Valentin, Hans: *Med. Welt* No. 2:121, Jan. 9, 1960. 6. Hill, A. M.; Butler, H. M., and Laver, J. A.: *M. J. Australia* 2:633, Oct. 31, 1959.

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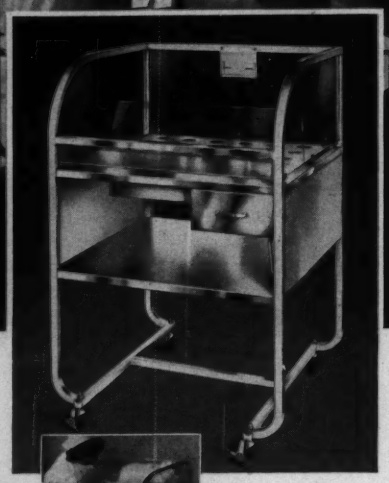

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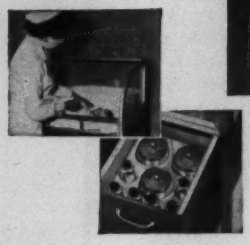

P9904—Cabinet Model
Sliding doors, both sides

P9910—Ravenswood Model
Drawer with bottle insert

P9912—Michigan Model
Aseptic open compartment

P9900—Bethlehem Model
Removable Plastic basket

P9901—Angelus Model
Dressing stand extends

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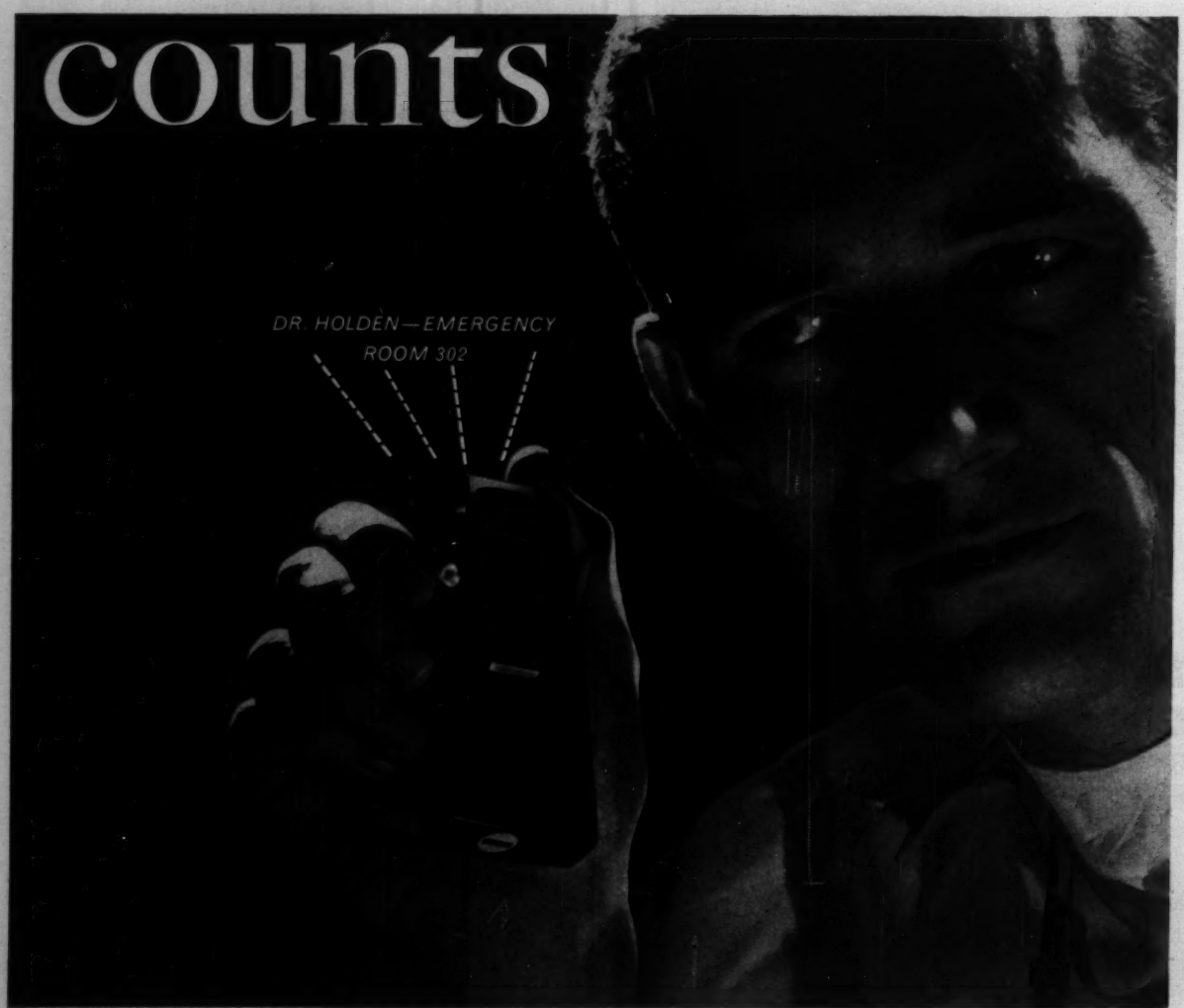

introducing the authors

Jack C. Haldeman, M.D., assistant surgeon general and chief of the Division of Hospital and Medical Facilities, United States Public Health Service, emphasizes the need for a more systematic approach to hospital research in an article beginning on page 36.

DR. HALDEMAN

Dr. Haldeman, who received his A.B. degree from Phillips (Okla.) University in 1933, his B.S. and M.D. degrees from the University of Oklahoma in 1937 and his M.P.H. degree from the University of Michigan in 1943, has been in his present position since 1958. Following his graduation from medical school, Dr. Haldeman spent a year as chief of epidemiology with the Alaska Department of Health. Following this, he served as medical director for the Wasco County (Ore.) Health Department from 1939 to 1941. After spending a year as medical director for the Hopkinsville (Ky.) County Health Department, Dr. Haldeman served as general medical consultant to Puerto Rico from 1943 to 1944 and general medical consultant to New Orleans from 1944 to 1946, when he joined the U.S. Public Health Service.

During his career with PHS, Dr. Haldeman has served as the medical officer in charge of the Arctic Health Research Center, Anchorage, Alaska (he was also the founder); chief, Division of General Health Services, and chief, Divison of State Grants, Washington. He is a member of several professional organizations and is governor and fellow of the Arctic Institute of North Amerca, diplomate of the National Board of Medical Examiners and a fellow of the American Public Health Association.

Bennett J. Cohen, Ph.D., D.V.M., assistant professor of physiology and director of the vivarium, School of Medicine, University of California, discusses present standards for animal research laboratories in hospitals in an article beginning on page 43.

Dr. Cohen has been in his present position since 1958. Prior to this, he was associated with the University of California as state-wide veterinarian, lecturer in the School of Public Health, instructor in physiology and consulting veterinarian to the university physician. After receiving his D.V.M. degree from New York State Veterinary College, Cornell University, in 1949, Dr. Cohen served as veterinarian and director, department of animal care, Northwestern University Medical School, until he received his Ph.D. from the university in 1953.

Dr. Cohen, a diplomate of the American College of Laboratory Animal Medicine of the American Veterinary Medical Association, holds membership in many professional organizations.

Edmund D. Pellegrino, M.D., chairman of the department of medicine, University of Kentucky Medical School, discusses the changing role of the professional nurse in the hospital in an article starting on page 56.

DR. PELLEGRINO

Dr. Pellegrino received his M.D. degree from New York University College of Medicine in 1944 and had a variety of experiences in his career before he joined the University of Kentucky School of Medicine in his present position in 1959. Since that time, he has also served as a consultant in internal medicine at the United States Health Service Hospital and the Veterans Administration Hospital, Lexington, Ky.

Dr. Pellegrino is a fellow of the American College of Cardiology, American College of Chest Physicians and the New York Academy of Medicine.

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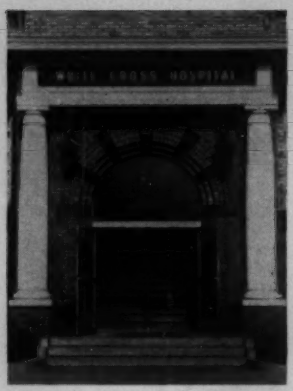

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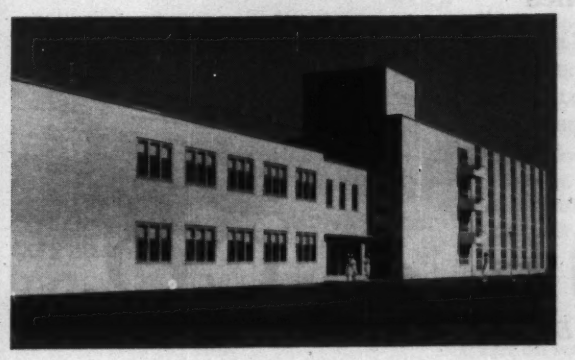

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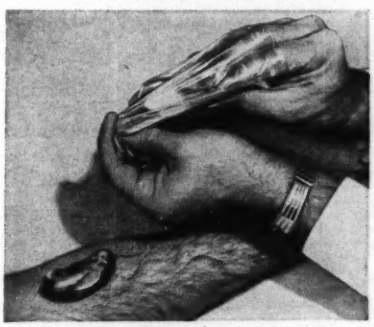
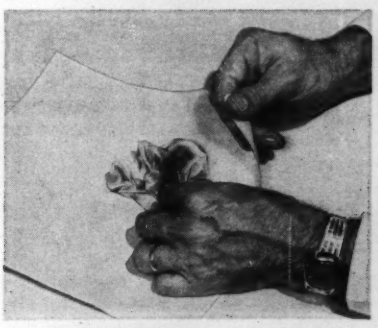
With gloved hand, grasp bandage. Don't touch other hand to bandage.

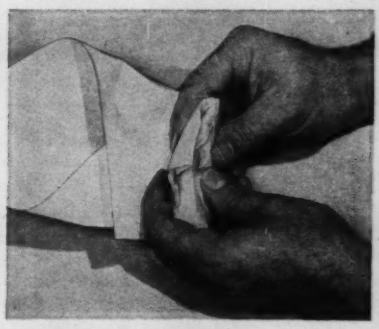
Pick up bandage firmly with gloved fingers. Hold by finger tips.



Grasp cuff of glove with other hand, pulling back over hand, fingers and bandage.



Bandage is now INSIDE of glove. Place on paper from which glove was dispensed.



Fold sides of paper in over glove and roll up tightly.

Finally, give rolled paper half-twist. All bacteria is locked in air-tight glove and paper wrapping—ready for incinerator.

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SPECIAL REPORT

Aged Care, College of Surgeons Key Topics at AMA Denver Session

MEMBERS OF the AMA's house of delegates had no more than settled in their seats at the opening session of the house on November 27 in Denver when Leonard W. Larson, M.D., president of the AMA, issued the call to battle. From that moment on, there was hardly a speech or a report which didn't echo in one way or another Dr. Larson's call. He said medicine was "engaged in a historic struggle to preserve our country's unique system of medical care and our stature as a profession". He said the Administration's proposal to put medical care for the aged into the social security system "would certainly represent the first major, irreversible step toward complete socialization of medical care".

Dr. Larson is a man of mild appearance, and he doesn't raise his voice very often on the podium. But he jabbed his finger toward his audience and spoke with cold determination as he said, "The immediate objective of this legislation is to substitute compulsion for voluntarism in the financing of health care. It is to substitute decision-making by a small elite corps of federal administrators for the independent decisions of millions of consumers of medical service. . . . The compelling issue then is socialization versus voluntarism—or compulsion versus freedom of choice."

The AMA president compared the King-Anderson proposals for the Administration with the federal aid to education bills, and then asked his audience to "imagine the universal opposition to the (aid for education) bills, if they, like the medical aid bill, provided for direct federal payment of teachers' salaries. . . . This bill is, in truth, one of the most destructive proposals affecting the federal-state relationship ever introduced in Congress".

LARSON LAMBASTS LABOR

Dr. Larson lambasted labor for what he called vilification of the AMA, and then took on Abraham A. Ribicoff, Secretary of Health, Education, and Welfare, for his "attempt to cast the AMA as a monolithic, dictatorial organization exercising sanctions against our members who disagree with the leadership—a totally false accusation made purely for its propaganda effect".

Dr. Larson then told of some of the things the AMA was doing or going to do to fight the King-Anderson proposal. One of these things is an attempt to persuade hospital and Blue Cross administrators and trustees to support the AMA's position, especially those hospital administrators who will attend the special meeting of the AHA's House of Delegates in January to discuss the AHA's position on health care.

Dr. Larson said, "It is no secret that within the hospital and Blue Cross groups there are some individuals who, at this time, are leaning toward a federal program directed from Washington which would use the Blue Cross plans as fiscal agents. We have requested medical societies, and, where appropriate, individual staff physicians to contact hospital admin-

HIGHLIGHTS

The American Medical Association's house of delegates, meeting in semiannual session in Denver late last month, focused on two major topics:

***Health Care Of The Aged*—The house of delegates put a life-or-death label, insofar as the medical profession is concerned, on the fight against the Kennedy Administration's proposals to use the social security taxing mechanism for the health care of the aged without regard to means. The delegates committed themselves to leave nothing undone to beat the Administration proposals. One of the things that the house was told was that the American Medical Association was making an effort to persuade hospital and Blue Cross administrators and trustees to stand firm against the social security taxing approach, with the hope that (and the AMA's eyes were obviously on the forthcoming special meeting of the American Hospital Association's House of Delegates, January 3-5) the opposition of hospitals and Blue Cross to the social security approach would be strengthened.**

***The American College Of Surgeons*—Recent statements by a spokesman of the American College of Surgeons regarding (1) the propriety of payments by a surgeon to a referring physician under any circumstances and (2) the quality of much of this surgery being done in the United States produced a spate of angry resolutions, vocal condemnation of the college of surgeons and its spokesman. One unexpected result of these statements was a call for still another across-the-board investigation of the Joint Commission on Accreditation of Hospitals by a committee of the house of delegates of the American Medical Association. This obviously was a repeat performance of the so-called "Stover Committee", which did exactly the same thing a few years ago.**

In the fervor of the oratory, the two issues ran almost a dead heat. But in importance to the leaders, there was no comparison between the two. The college of surgeons matter was unfortunate. The proposal of the Kennedy Administration was disastrous. An even once-over-lightly reading of AMA pronouncements on legislative proposals should dissipate any doubts that the AMA would fight the social security tax approach to meeting the health care needs of the aged to the bitter end. The meeting last month in Denver laid it on the line—the doctors of the nation were summoned with their wives and their wallets to a no-surrender war against any proposal which provides health care without regard to need, as the Kennedy proposal does.

istrators and trustees to acquaint them with our position and to explain the reasons for it. We have urged our medical representatives not to impugn their motives, but to recognize their thorny fiscal problems and to discuss with them these controversial issues in an atmosphere of mutual trust. We hope these conversations will have two results: To strengthen the majority of American Hospital Association and Blue Cross members in their opposition to the King-Anderson approach, and, even more, to lead to constructive joint actions to meet the admittedly difficult financial problems of some hospitals and the Blue Cross plans especially."

He said that the initial objective of arousing physicians on this subject had been achieved, that the AMA story was being told as widely and forcefully as possible and that "special efforts are being made to correct the falsehoods disseminated by the proponents of the King-Anderson legislation". Dr. Larson said the AMA may have had its opponents in this fight, but it also has had many allies, such as the American Farm Bureau Federation, the insurance industry, the Blue Shield Plans, the pharmaceutical associations, manufacturing, the young men of the junior chambers of commerce, etc.

When last beleaguered (by President Truman's health program of the late forties), the AMA turned to opinion molders to win its campaign. This time the AMA has chosen a political action group of its own creation, but independent of it, to arouse the countryside. The AMA calls its organization AMPAC (American Medical-Political Action Committee), and sees it as medicine's counterpart to labor's COPE (Committee on Political Education). The head of the nonpartisan organization is Gunner Gundersen, M.D., of Wisconsin. Milton V. Davis, M.D., of Texas, one of the members of the committee, explained the importance of the endeavor to the house of delegates. He said that the committee would be a permanent one and its first aim would be to gain control of the U. S. Congress, and to put Congress in the hands of men who would, in his words, "vote for freedom". He said that the doctors had to get down to political activity at the precinct level, and had to study those who were running for office with great care. He said that AMPAC would have to know how a potential candidate would vote, as he put it, when released by the Speaker and when not released by the Speaker. And, Dr. Davis said there is only one source for that kind of information, and that source is the man's personal physician.

'A REFRESHING APPROACH'

Further enthusiasm for AMPAC came in from Warren L. Bostick, M.D., chairman of the group which studied most of the matters having to do with legislation and public relations. Dr. Bostick told the house that "a particularly necessary and refreshing approach, long overdue and most necessary, for the survival of the philosophies of any group, has been created in the proposals for AMPAC. We believe that it is only through such separate but collateral effort that the full impact of our sincerity in defending the public's health can be brought to the attention of the Congress with force. We believe defending the public health is a clear obligation of medicine and that every physician should give his wholehearted support to the high objectives of AMPAC.

"Your committee believes that it is the obligation of each and every delegate at this meeting to personally sense the urgency of this situation. He must return to his home with the personal responsibility and challenge to alert the individual physician members of his local society and to mobilize his friends, so as to achieve maximal results.

'. . . WE MUST NOT FAIL'

"United, as well as individual, effort is essential. And the new AMPAC organization must be used to its full potentiality—by letter and word of mouth—by all physicians. If each delegate does not assume a personal individual responsibility, our efforts shall not succeed regardless of what statements this house of delegates or its officers are inspired to make. To stop short of our total effort is to invite disaster and to let loose upon our beloved America irreversible forces which will ultimately destroy her. We cannot and we must not fail."

The legislative side of the health care of the aged issue drew most of the attention and most of the speeches, but there was other activity. The Oregon delegation urged that the AMA advocate and support the use of voluntary prepaid health insurance plans in providing health services for aged individuals determined to need governmental assistance, and that the use of such funds be to pay the premium, or a part of the premium as needed, of a properly qualified voluntary prepayment health insurance plan.

This drew almost unanimous support at the hearing on it, the objectors fearing that its adoption would perhaps carry with it an impression of compromise on the issue as a whole. The reference committee took heed and referred the resolution to the council on medical service.

In Washington a year ago, the District of Columbia delegation led a successful fight for the creation of the Joint Commission on Voluntary Nonprofit Prepayment Plans to strengthen them as an answer to the King-Anderson type of legislation. The District of Columbia physicians did not think that there had been enough action, and introduced a resolution to get something done. Raymond T. Holden, M.D., author of the resolution, told the reference committee that perhaps a shuffling of priorities for AMA projects was in order, and said "first things should come first". He reminded the committee that the members had heard a great deal of talk about political action, and he urged them not to forget that "we must have something to fight with. That something is good voluntary prepayment plans. Anything that we can do to improve them should be done quickly".

The reference committee and the house agreed with him that the joint commission should move up on the priority scales.

There is no variation on the AMA's theme that government help should be restricted to those who need help and should not be given on an across-the-board, no-determination-of-need basis. In line with this philosophy, the house of delegates has recommended the elimination of categories, such as dependent chil-

dren and the totally and permanently disabled, in programs of assistance to the needy at the federal and state level. The AMA said assistance should be provided through a single program.

The other major item on the agenda of the house of delegates was the American College of Surgeons, and what the AMA's house considers the penchants of the college and its spokesman for getting the medical profession as a whole in hot water. A few years ago it was Paul Hawley, M.D., then the director of the college, who drove some members of the medical profession into a rage by some of the things he said. Now it is Robert S. Myers, M.D., executive assistant director, who is succeeding him as the low man on the delegates' totem pole of popularity. Several weeks ago, Dr. Myers let it be known that the college thought the AMA's stand that a referring physician could be paid by a surgeon if he actually assisted at the operation was wrong and was pussyfooting with fee-splitting. He also said that a college survey indicated that some 50 per cent of surgery is done by unqualified men. There was little chance that his remarks would go unnoticed. He made them at a luncheon meeting of the National Association of Science Writers. The expected rash of headlines produced an expected reaction, a rash of resolutions urging the AMA's house of delegates to do something about the college and Dr. Myers—one of them being to get Dr. Myer's resignation and another being to take over the Joint Commission on Accreditation of Hospitals without the cooperation of the American College of Surgeons, the American College of Physicians or the American Hospital Association.

ANGRY MEDICAL MEN

Some of the resolutions on the college of surgeons were obviously written by angry men and the authors showed up with other angry men at the reference committee hearing on all of the resolutions. The board of trustees of the AMA, sensing the degree of anger, arranged a meeting with the board of regents of the American College of Surgeons and it seemed possible to some that this would take the sting out of any formal actions, even if it couldn't affect the already-written resolutions.

Indiana, for example, objected that the college of surgeons had embarrassed the medical profession as a whole. New Jersey reminded the house that in 1959 it had called upon the AMA to achieve a rapport "to ensure that the remarks and writings of all authoritative and quasi-authoritative spokesmen will at least be consonant with fact and truth, and therefore consonant with the genuine best interests of the profession and the public". But, New Jersey complained sadly, "In recent months there have been a renewal and a reiteration of such deprecatory comments—as uncalled for as they are unfounded and unjustified". Therefore, New Jersey insisted, the AMA should take "instant and effective steps to defend and safeguard the public and the profession against irresponsible attacks from groups or individuals bent upon doing them undeserved injury".

The general practitioner seemed the angriest of the lot. One resolution from Lester D. Bibler, M.D., of Indiana, charged that the college had "maligned and belittled the general and family practitioner". He thought that they should cease and desist. A. E. Ritt, M.D., of Minnesota, wasn't satisfied with the vigor of the language in one of his two resolutions, so he rewrote it and said that the members of the American Academy of General Practice have been "maligned, vilified and castigated in the public lay press by organized antagonists" and then he identified the antagonists, the American College of Surgeons. He called upon the AMA to censure the American College of Surgeons for "its present course of irresponsible public criticism of medical practice, and admonish it regarding the public degradation which it is thus inflicting upon all of medicine". As Dr. Ritt sees it, the AMA and only the AMA should make jurisdictional and ethical pronouncements for physicians.

SURGERY PERFORMED ON JCAH

Dr. Ritt's ire led him to suggest radical surgery on the Joint Commission for Accreditation of Hospitals. His resolution stated that "there appears to be a vested interest by the American College of Surgeons" in the joint commission, and that "this is contrary to the tenets proclaimed in the organizational structure of the joint commission". He said that "this vesting could produce opinionated examiners," and therefore he wanted the house to resolve that the American Medical Association correct the situation. He also recommended that the American College of Surgeons be censured for its conduct in the joint commission and that "the American Medical Association assume the entire responsibility of the endeavors of the Joint Committee for Accreditation of Hospitals".

Nowhere in the resolutions did the name of Dr. Myers appear, but it was quickly mentioned during the debate. Dr. Ritt wanted the debate to be in private, but the chairman of the reference committee kept the hearing open. Dr. Bibler wanted to see the resignation of Dr. Myers handed in to the college, and Amos Johnson, M.D., of North Carolina, said he was interested in the motivation of the person who dropped these "50-megaton blasts from time to time". Dr. Johnson rhetorically asked that if someone wanted federal medicine "what better way of bringing it about than by dropping these 50-megaton blasts every so often?"

The delegates were told that it would be extremely expensive for the AMA to pick up the whole burden of the joint commission, even if the other members submitted to being eliminated. To that, others commented that the dues were going up $10 a year for three years and that just another dollar would pay the bill. Harry Mantz, M.D., of Illinois, said, "Let's put Dr. [Kenneth] Babcock (director of the Joint Commission on Accreditation of Hospitals) and his group under the Council on Medical Education and Hospitals [of the AMA]."

James D. Murphy, M.D., of Texas, said he had proposed this in 1959 and still thought it was a splendid idea. He said that if AMA took it over, the AMA would give reports to the house and "enable doctors to handle their own problems in their own hospitals". Dr. Johnson of North Carolina, a member of the joint commission, was extremely critical of the conduct of

the joint commission and said that if things didn't improve he would resign.

COMMITTEE RECOMMENDATION IGNORED

The reference committee recommended to the house that in view of the forthcoming meeting between the AMA and the college, no action should be taken on the resolutions. The house would have none of this. After some parliamentary haggling, it was proposed that the house agree with the intent of the critical resolutions. Ezra A. Wolff, M.D., of New York, urged the house to act cautiously, reminding the delegates that the adoption of a resolution which approved the intent of the resolutions would be approving the intent of resolutions calling for the censure of the college of surgeons. The house did not listen to Dr. Wolff and voted its agreement with the intent of the resolutions, 99 to 77.

The American Medical Association, like many other modern organizations, finds that the creation of a committee often solves a thorny problem. So, on Dr. Ritt's resolution about reorganizing the joint commission, the reference committee noted that there were expressions of dissatisfaction and that the way to handle it was to not adopt Dr. Ritt's resolution, but that "a special committee of the house be appointed by the speaker to investigate all facets of the operation of the Joint Committee on Accreditation of Hospitals and report to the house at the December 1962 meeting".

On other matters, the AMA:

- Postponed action on several resolutions aimed at eliminating the disparity in the number of interns and residents and other physicians in training between community hospitals and the university teaching centers.
- Heard an appeal for the dropping of the word "intern" and the use of "assistant residents" in its stead as a method of permitting an increase in their salaries and thus producing more applicants for medical schools.
- Urged effective implementation of the Mutual Education and Cultural Exchange Act so that foreign physicians and other medical personnel who come to the United States would eventually return to their home nations.
- Backed off from implementing a policy decision of June 1961 that in medical disciplinary cases where the local societies were not taking action or could not take action, the American Medical Association could invoke original jurisdiction. This was opposed as a departure from the organization of the American Medical Association as a federation of constituent societies. Over the objection of one delegate who wanted it defeated right then, the matter was referred to the appropriate council for further study.

digest of NEWS

APHA SUPPORTS SOCIAL SECURITY FINANCING OF AGED HEALTH CARE—A shift in position on the financing of health care of the aged was the major outcome of the American Public Health Association (APHA) annual meeting in Detroit, November 13-17.

The APHA governing council adopted a resolution that gives the association's support to a plan to provide medical care for the aged through the nation's social security system. The resolution supporting the King-Anderson bill also gives support to the Kerr-Mills bill.

In supporting the social security financing of health care of the aged, the APHA voted support of "appropriate proposals, including social insurance mechanisms, to provide for the sound financing of adequate health services, to be available to the aged individual without a means test and on a paid-up basis without additional fees or payments for covered services in institutions, outpatient departments and organized home care programs . . ."

A resolution recommending that hospitals be brought under the unemployment program was rejected by the public health leaders on the grounds that this represented a matter of internal hospital management rather than public policy.

Other resolutions adopted by the APHA's governing council included:

- Support of the principle that health insurance payments "may include reimbursement of direct service organizations on a per capita basis for those who so desire".
- A recommendation that appropriate federal, state and local agencies develop and enforce standards for fallout shelter construction and increase radiologic monitoring of public water supplies.
- A promise to "exert influence" to put home nursing services in prepayment health service plans.

Charles Glen King, Ph.D., president of the Nutrition Foundation, Inc., was installed as president of the association. John William Roy Norton, North Carolina director of health, was chosen president-elect.

FEDERAL TRADE COMMISSIONER RECOMMENDS DISMISSAL OF ANTITRUST CHARGES—A federal trade commissioner recommended last month that antitrust charges against several large drug companies be dismissed. The commissioner has been taking testimony and studying the evidence for the past two years. His decision is subject to appeal and review by the full commission.

The examiner in the case said that the evidence "leads logically to an inference that no price-fixing conspiracy existed". The complaint was filed against the companies by the commission in 1958, following a two-year investigation. It was alleged that the companies had for years "fixed and maintained arbitrary artificial, noncompetitive and rigged prices" on three widely used antibiotics. *(Details p. 100)*

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*Tyler, V.R.: Consumer Evaluation of Reprocessing Technics for Unused Surgical Sutures, unpublished report.

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accreditation problems

KENNETH B. BABCOCK, M.D.

- Emergency water supply
- Conditions preventing accreditation
- Surgery records
- Cancer registry
- Medical staff bylaws
- Segregation of maternity section

In setting up a disaster program, is it essential for accreditation that the hospital dig a well to have an auxiliary water supply in the event the community water supply is cut off?

No. You do not always get water when you dig a well. Also, well water may be made unpotable or totally unfit for use. As an example, during the recent Hurricane Carla, most wells were heavily contaminated by sewage and salt water. If you have only one source of water, know where and through what agencies you can get an emergency supply. This point is very important in a disaster program.

* * *

If the surveyor from the Joint Commission discovers a procedure or condition which prevents accreditation, does he stop immediately or finish the survey?

He finishes the survey. Few conditions existing singly would cause nonaccreditation. Examples of such conditions would be extreme fire hazards, ghost surgery and employment or privileges granted to incompetent or unqualified physicians. Most nonaccredited hospitals have at least 20 or more weaknesses, both major and minor. Our mission is to help hospitals attain and surpass our minimal standards. Our function is not punitive.

* * *

At the time of our last survey, we were told that the operating room registry should provide space for information about complications during surgery. Please explain.

Complications occurring during surgery should be listed in the registry. Examples of such complications are excessive hemorrhage, shock, nicked bowel or bladder, cardiac arrest, etc. The chief of surgery should check this column frequently and if possible, determine the reasons for these happenings.

* * *

Does the Joint Commission require that hospitals maintain a cancer registry?

No, we do not. If your surgical-gynecological staff is interested in maintaining one, have them write to the American College of Surgeons, 40 E. Erie St., Chicago 11, for information.

* * *

Why does the Joint Commission place so much emphasis on medical staff bylaws, rules and regulations?

Good medical staff bylaws, rules and regulations are the very foundation of an organized medical staff which lives up to its responsibilities and is dedicated to the improvement of patient care. Without this basic organizational setup hospitals could be run by individuals who might not care about anything except their own interests, and might have no regard for the rights of others.

* * *

Our obstetrical beds are being used only at about a 50 per cent occupancy rate. Why can't we put "clean" gynecological or surgical cases in these empty beds?

These obstetrical beds should not be used for other cases because of the ever present danger of hospital infection. Statistics show that the mother and child are very susceptible to infections of any sort. The maternity section is the most common area in the hospital for occurrence of infection. Obstetrical units and nurseries should be segregated, both functionally, for nursing care, and architecturally.

This material has been prepared by the Joint Commission on Accreditation of Hospitals, Dr. Kenneth B. Babcock, director. Questions should be sent to the Commission, 200 E. Ohio St., Chicago 11, Ill., or to HOSPITALS, J.A.H.A., for referral to Dr. Babcock and his staff.

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Hospital Monograph Series

What is the purpose of the Hospital Monograph Series and what items are currently available? Please inform me also what the several items cost and whether additions to the series will be published soon.

The purpose of the Hospital Monograph Series, established by the American Hospital Association in 1957, is to provide a medium for publication of reviews and research studies of a scholarly nature and of interest to the hospital field.

Nine monographs have been published to date; a tenth is now in press, and an eleventh is in production. The listing follows:

No. 1: *Hospitals and the Corporate Practice of Medicine,* American Hospital Association. ($2.50)

No. 2: *Modernization Needs in Existing Hospital Buildings,* American Hospital Association. (Out of print)

No. 3: *Prepaid Medical Care and Hospital Utilization,* Paul M. Densen et al. ($2.50)

No. 4: *Effect of Nurse Staffing on Satisfactions with Nursing Care,* Faye G. Abdellah and Eugene Levine. ($2.50)

No. 5: *Physicians' Private Offices at Hospitals,* C. Rufus Rorem. ($2.00)

No. 6: *Hospital Utilization Under Insurance,* Milton I. Roemer and Max Shain. ($1.75)

No. 7: *A Study on the Nonsegregated Hospitalization of Alcoholic Patients in a General Hospital,* Mark Berke et al. ($1.75)

No. 8: *Comparisons of Intensive Nursing Service in a Circular and a Rectangular Unit,* Madelyne Sturdavant. ($3.00)

No. 9: *Home Care,* David Littauer et al. ($2.75)

No. 10: *Patient Care Facilities: Construction Needs and Hill-Burton Accomplishments,* Alan E. Treloar and Don Chill. In press.

No. 11: *Effective Utilization of Social Workers,* Margaret M. Heyman. In production.

Monographs may be ordered from the Association singly, or on the convenient Automatic-Mail-on-Publication plan by which you may receive a copy of each new monograph on approval at the time of publication.

—MARJORIE M. LAWSON

Qualified assistance for surgeons

Some time ago, our medical staff adopted a resolution which would change the medical staff bylaws in the following respect: It would no longer be necessary for a surgeon to stand by in the operating room during surgical procedures with a view to taking over and completing a procedure in case an emergency occurred, such as illness or other incapacity of the operating surgeon. We are concerned about this resolution from several viewpoints, but may we please have your comments on it?

Qualified assistance in surgical procedures is a necessity. In any case in which a major body cavity is opened, or in any case in which the lack of a qualified assistant would place the surgeon at a disadvantage, then a qualified assistant must be present, scrubbed and participating in the operation. This precaution is not only for the welfare of the patient but also for the benefit of the physician should he become incapacitated rendering him incapable of completing the procedure. Obviously, the hospital is also involved.

The American Hospital Association, the American College of Surgeons and the Joint Commission on Accreditation of Hospitals have reiterated this point during the last few years. At present, there is nothing to indicate that these bodies will weaken their position on the need for qualified assistance in the operating room.—J. R. ANDERSON, M.D.

Unit value scales

Will you please discuss unit charging systems for radiology and pathology department services in hospitals?

Equally applicable to hospital charges would be the "unit values" established by various medical groups as guides for the fee-setting practices of physicians in the private practice of these specialties. Both the American College of Radiology and the College of American Pathologists have developed and published "unit value scales".

Several medical societies have included radiology and pathology services in their locally determined unit value schedules. Perhaps foremost among state medical societies which have put considerable time and effort into the development of their respective unit value scales are those of California, Nebraska, Pennsylvania and the District of Columbia. Copies of these undoubtedly would be available on request.

The National Association of Blue Shield Plans, 425 N. Michigan Ave., Chicago 11, has worked up a "Professional Services Index" for use with national accounts. This index is the same thing as a unit value or relative value scale. It also includes radiology and pathology scales.

Blue Shield developed its units by plotting out the applicable Blue Shield fees paid by the individual service plans and reducing the results to units or indices. This index is perhaps the best unit value scale in existence, reflecting as it does a composite of nationwide opinion concerning relative values.—RICHARD J. ACKART, M.D.

The answers to these questions should not be construed as being legal advice. Hospitals with legal problems are advised to consult their own attorneys.

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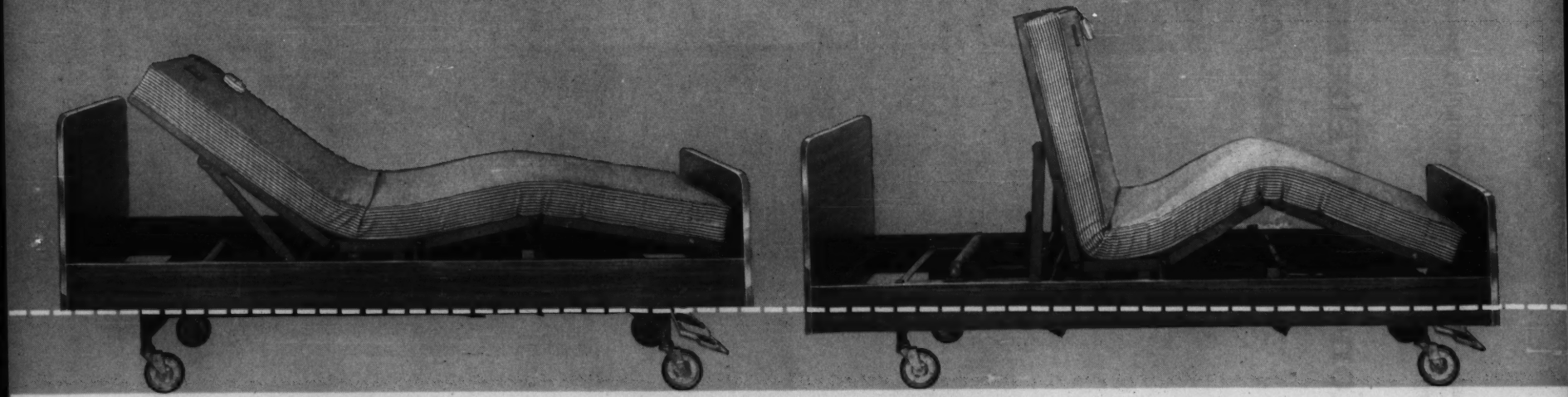
for greater patient safety



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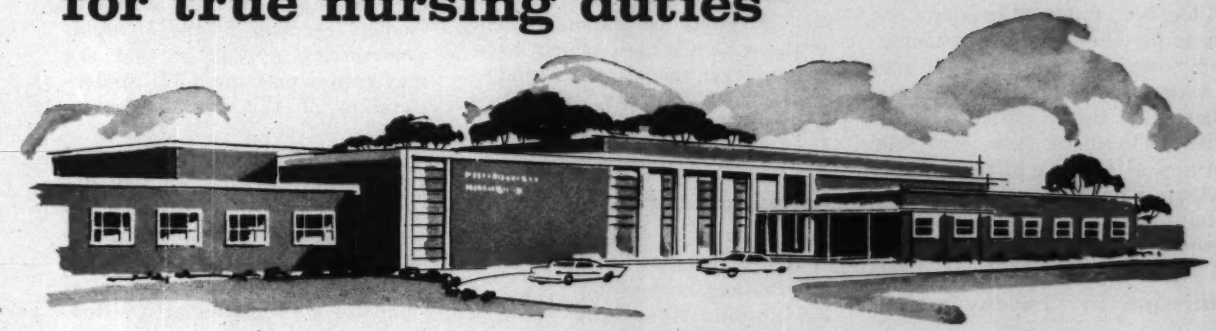

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LETTERS TO THE EDITOR

Iowa home study course

Dear Sir

The publication of my article in the Nov. 1, 1961, issue of your Journal has been followed by many requests for our home study course. I am sorry we cannot provide sets of material for all of these persons. I hope that the incentive to work out something of their own will develop as a result of this article. —ANNA K. JERNIGAN, *dietary consultant, Iowa State Department of Health, Des Moines, Iowa.*

Omission in Levycky article

Dear Sir

Thank you so much for your cooperation in the publication of my paper on "Medical Illustration in the Community Hospital", which appeared in the Sept. 1, 1961, issue of **HOSPITALS**, J.A.H.A. As I read over the paper, I noticed that through an error in typing the original manuscript here, the name of one school had been omitted from the list of schools of medical illustration in the United States. The list should have included the School of Medical Illustration at the University of Illinois College of Medicine, Chicago, which is one of the larger schools of its kind.—NICHOLAS V. LEVYCKY, *medical illustrator, Bridgeport (Conn.) Hospital.*

Compliments for Ray Brown

Dear Sir

The publication of Ray Brown's observations concerning "Evaluating Hospital Administration" will be a tremendous service to all of us in this field. I use the future tense because I am confident that it will take some time for many trustees and administrators to catch up with this advanced thinking. All of us must plan, organize, execute and evaluate; but the process of evaluation is probably the forgotten fourth of our job. This may be so because we have rather frail hooks on which to hang the process, and besides, everyone else is inclined to do it for us.

This article defines the process and the problems it entails most succinctly, and I want you to know that I plan to present it to our board of trustees. I have made a copy available to Ida Clemens, medical reporter of the *Memphis Commercial Appeal* so that she may help to promote public understanding of this "public enterprise".

I do hope that the idea of a national approval program will develop and flourish so that the degree to which the hospital can be expected to accomplish each of its diverse objectives can be better understood and appreciated.—ROBERT C. HARDY, *administrator, City of Memphis (Tenn.) Hospitals.*

* * *

Dear Sir

Ray Brown's recent article appeals to me as one of his best. I plan to circulate it among our trustees.

If a program could be established with the insight and scope depicted in this article, it would be a giant forward step. I hope you have in mind some ways in which this idea may become a reality.—R. R. GRIFFITH, *director, The Delaware Hospital, Inc., Wilmington, Del.*

* * *

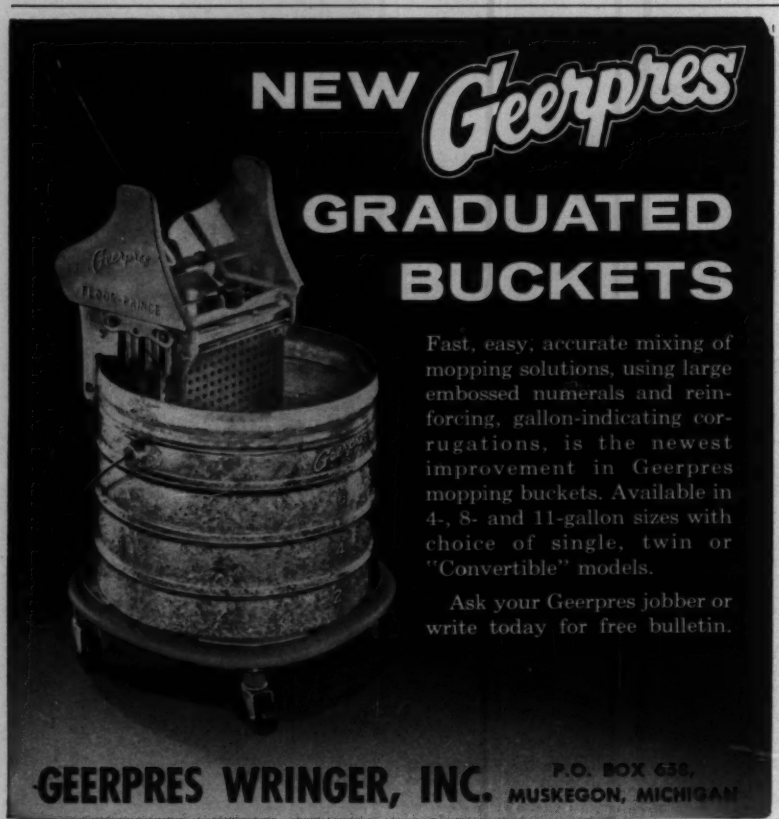
Dear Sir

Just a word to tell you how much I enjoyed reading Ray Brown's article. It is a profound analysis of and a masterful treatise on the nature of the modern hospital. I don't know whether it can be done, but I would certainly like to see a copy of the article sent to every state insurance commissioner as well as to magazine and newspaper publishers all over the country.—MORRIS H. KREEGER, M.D., *hospital consultant, Chicago.*

* * *

Dear Sir

I don't believe I ever read a more interesting article than that which appeared in the Oct. 1, 1961, issue of **HOSPITALS**, J.A.H.A., concerning the evaluation of hospital administration.—MURRAY E. HILL, *administrator, Tunica County Hospital, Tunica, Miss.*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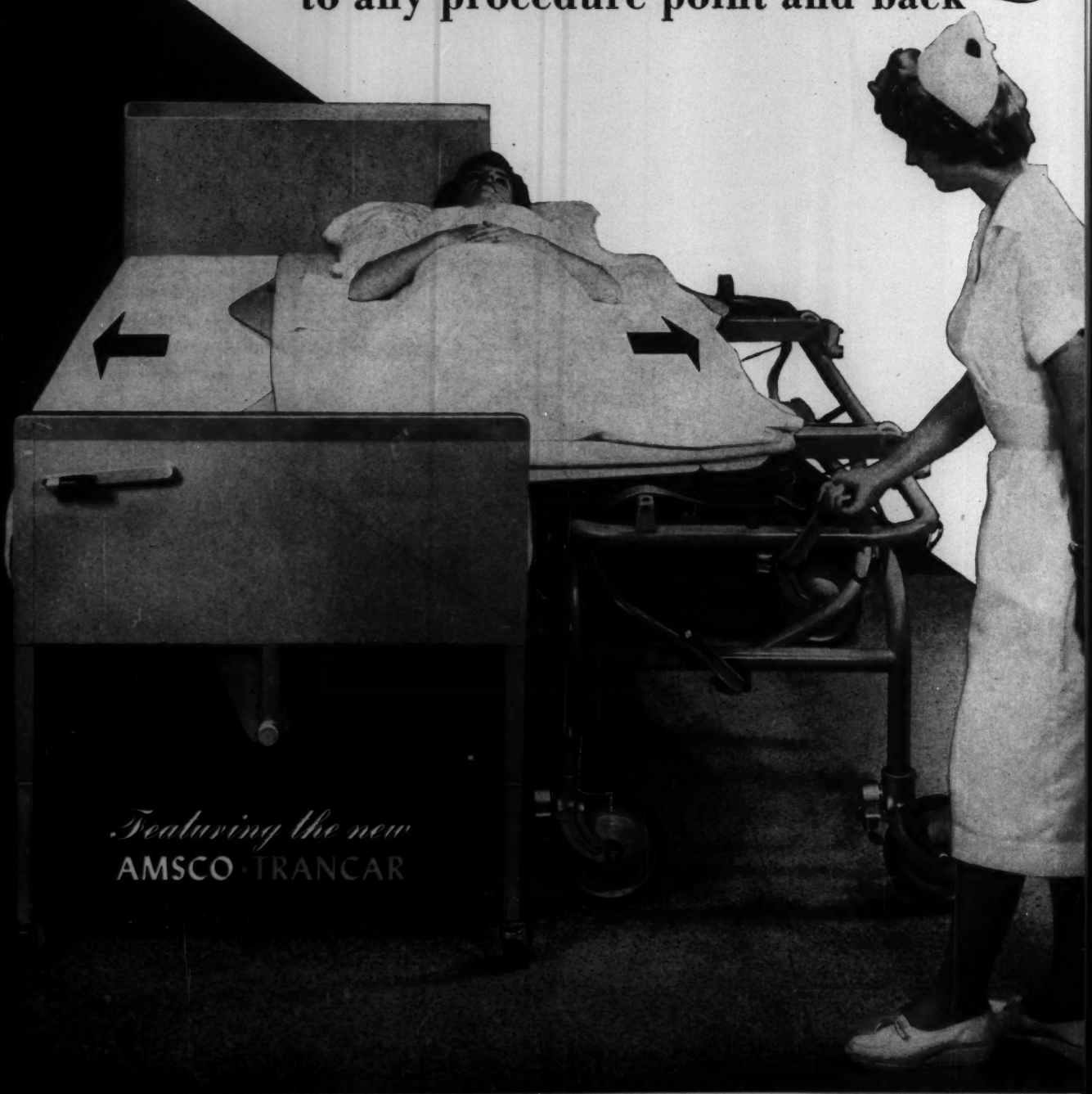

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The Amsco System is as simple as it is functional. Patients scheduled for surgery or extensive examination and treatment are placed upon a special one-inch mattress pad. The pad is comfortable, fully conductive and X-ray penetrable. The low-friction, airfoil top of the TRANCAR is cranked under the pad, fastened and returned. The pad *and* the patient are transferred horizontally *in less than two minutes.* Reversing the process places pad and patient on the operating, X-ray or treatment table, or back in bed. For the postoperative period the TRANCAR itself serves as a recovery bed, with Trendelenburg, reverse Trendelenburg and I.V. facilities.

Automatic locking devices adapt the TRANCAR to most hospital beds and to virtually all operating, treatment or examining tables. The Amsco System is adaptable to *every* hospital. It provides substantial benefits to personnel and never-before-equalled comfort and protection for critically ill patients.

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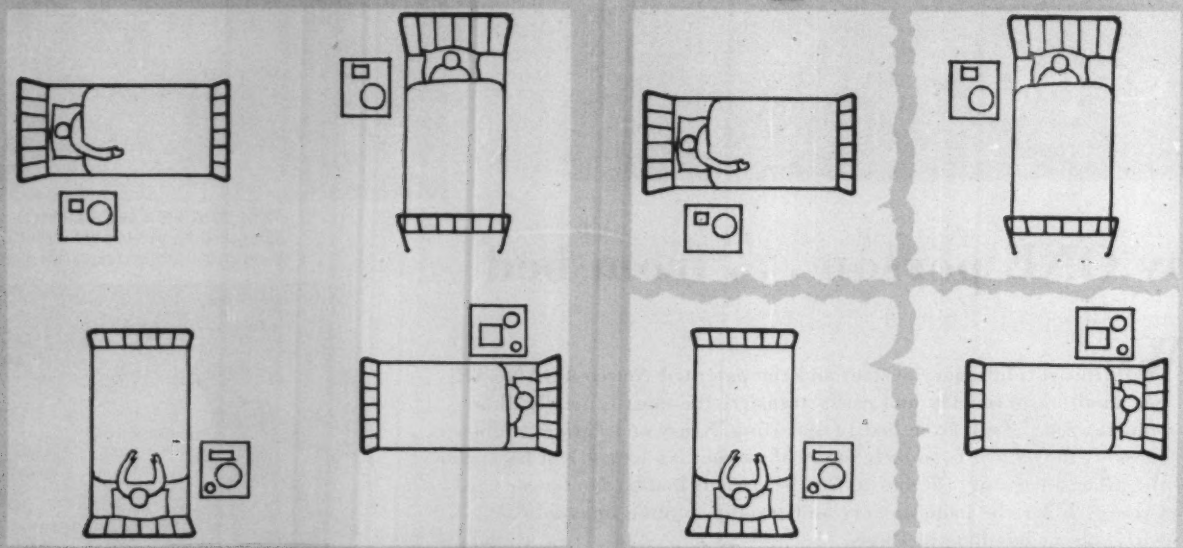

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HOSPITALS
JOURNAL OF THE AMERICAN HOSPITAL ASSOCIATION

editorial notes

—hospital research turns a corner

HOSPITAL research today is where medical research was in 1900, according to Jack C. Haldeman, M.D., assistant surgeon general, U.S. Public Health Service (see article beginning on page 36). Hospital research thus far has made only a modest contribution to hospital operational efficiency.

As Leona Baumgartner, M.D., commissioner of health, New York City, observed in a recent issue of this Journal,* "fragmentation, duplication, waste, inefficiency, gaps in the ways of delivering publicly and privately supported health services" are a consequence of the lag in applying the findings of medical and other health research to hospital operations, or of not applying them at all.

Hospitals, to be sure, have often very successfully applied research findings from medicine and other areas, but a good deal of carefully directed and controlled research is needed to utilize these findings fully in the hospital context.

Hospitals, in many respects, however, are improvising in response to the pressure of research developments in other health care areas, rather than progressing steadily toward acceptable and clearly defined hospital goals. This may result from failure to define the hospital's function and place in society adequately; more likely it results from failing to define hospital goals clearly and specifically.

Clear definitions of specific hospital goals require prior answers to other questions. Among them are: (1) What is a hospital? (2) What is its function in society? (3) What function can the hospital perform better and more economically than any other social agency? (4) How shall it perform this function most effectively?

In a general sense, the first three questions have been answered, although the answers are currently being redefined. It is the last question, however, which highlights the need for hospital research. Dr. Haldeman defines hospital research as "the application of scientific method to resolving administrative and operational problems besetting hospitals and to developing specific techniques and methods for improving the capacity of hospitals to meet their responsibilities to their patients and to the community."

Hospital research has several aspects, but one is demonstrating, on the basis of verified knowledge, how a particular practice or service can be carried out. Such demonstrations, to be significant, may require the use of special equipment or the construction of special facilities of an experimental nature. Passage of the Community Health Services and Facilities Act of 1961 provides up to $10 million annually for such activities. The Public Health Service has established guidelines (see article on page 41) for hospitals to help them meet the requirements laid down.

Hospitals which qualify for research grants will have an opportunity to overcome the existing gaps in ways of delivering health services to the public and to utilize previously unused medical knowledge. These hospitals will be able to conduct hospital research on a significant scale, which will further the hospital's unique societal role and will improve the quality of patient care and expand hospital services supplied to the hospital community.

*Hospitals and the Tragedy of Unused Medical Knowledge, HOSPITALS, J.A.H.A., 35:67, Aug. 16, 1961.

to all—

Season's Greetings

from the

Officers, Board of Trustees and Staff

NEW

Hospital research is still lacking well-designed studies upon which to develop broadly accepted generalizations, and this stems from a lack of trained research personnel, the author states. He emphasizes the need for a more systematic approach to hospital research, using guidelines (see accompanying article) and priorities for the kinds of hospital research needed if the sums presently available for research are to be put to the best use.

THE physician and the hospital are partners in providing health care. In one very important aspect, the development of hospitals has lagged behind the progress made in medical practice. Hospital research today is in the same position as medical research at the turn of the century. It is still trying to classify and to define its boundaries. Although primarily in the observational state, hospital research is beginning to make progress assisted by development in the fundamental sciences. This progress, however, would be accelerated if it were possible to delineate the hospital's goals in more specific terms.

It is the purpose of this paper to describe:

1. The nature of these goals, the scale of operation and dilemmas of the contemporary hospital
2. The nature and definition of hospital research
3. The different areas of hospital research which should be emphasized.

THE CONTEMPORARY HOSPITAL

The contemporary hospital is a complex institution containing many skills and resources for assisting the physician in his care of the sick. Like other contemporary institutions, the hospital has been affected by scientific, technological, economic and social developments.

As medicine increases in complexity, medical practice becomes more closely organized around the hospital as a service agency. Hospitals must recognize this trend and strengthen their relationship with physicians. They must provide physicians the opportunity to participate more effectively in hospital planning. This can be done without disrupting the traditional pattern of hospital organization and without interfering with the physician's traditional role of being the final authority on the care of the individual patient. The art of medicine must not be lost in the process of developing the optimum environment for the practice of the science of medicine. The hospital has become essential for the proper care of major illness, for treating patients with safety and convenience, for clinical research and for the practical education of future physicians. Thus, in the public mind today, hospitals' and physicians' services are interwoven.

The goals of a hospital as commonly defined are:

1. To assist the physician in the care of persons in the community suffering from illness or disability.
2. To carry on educational activities and scientific research related to the care of the sick and the injured.
3. To promote the general health of the community.

To these should be added the goal of creating a physical and administrative structure which facilitates the provision of the optimum in medical care and the prevention of disease.

Such aims do not provide sufficiently concrete yardsticks to measure either the extent or means by which these objectives are realized. ". . . care of persons in the community suffering from illness or disability" does not imply that facilities are sufficient to eliminate disease or illness—an obviously impossible task. The amount of service provided depends on what the community is willing and able to spend. Good health within limits is purchasable. The degree to which the attainment of this goal is desired is the question facing every community. Scarcity of available resources must be considered along with the question of whether optimum use is being made of the resources available. Decisions are made in terms of alternative application of given resources. The task still remains to compare the results attained by different courses of action.

Hospitals function within the interplay of many varied social and economic forces. These result in an unending cycle of change and adjustment and pose constant dilemmas of planning and management. Some of the more important examples are:

1. The complex interrelationships between physician, patient and hospital organization.
2. The conflict between institutional efficiency and the individual needs of the patient.
3. The increasing gap between the pressure to apply the advances in technology and medicine and the ability to finance their implementation.
4. The growing tendency for unnecessary duplication of facilities and services, particularly in urban areas.
5. The difficulties of obtaining maximum utilization from relatively inflexible physical and administrative structures.
6. The need to find new patterns of care and more flexible ways of assuring continuity of care.
7. The spread between increasing hospital personnel costs and the inability to make up the difference in gains in productivity per hospital worker.
8. The problem of developing teamwork among the professions involved in patient care within hospitals.
9. The problem of maintaining

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HORIZONS FOR HOSPITAL RESEARCH

by JACK C. HALDEMAN, M.D.

an atmosphere conducive to the practice of the "art" of medicine in the presence of the very complex hospital administration which is devoted to assisting the physician in practicing the "science" of medicine.

HOSPITAL: SETTING FOR RESEARCH

The scientist in hospital research is interested in creating the most efficient setting for assisting the physician in restoring the sick to health. He is interested in medical research from the standpoint of the changes it promises for the hospital in physical structure, equipment and staff relationships. Yet, he may regard medical research as a significant but perhaps an unstable part of a total picture which encompasses the hospital in its entire cultural, economic and social setting. He is not only interested in optimum means of delivering care to patients, but also in studies of administrative behavior.

Over the years, contributions to improved hospital operation have come from disciplines in which the hospital is not a direct concern. Ultimately, basic studies in physics, engineering, biology and sociology, as well as those in demography, the behavioral sciences and economics, will be of importance to hospital planning. The relation of the findings in these disciplines to hospital research may be remote, may be direct, or may merely consist of analogy to similar hospital situations.

Moreover, the simple question of obtaining useful numbers cannot be overlooked. Demographic, economic, morbidity, mortality, population and social statistics provide in addition to hospital statistics the data most frequently useful in hospital research. The demand of hospital administrators for such facts illustrates their importance. Facts by themselves, however, tell us little. Only as we arrange them can we arrive at generalizations from which to plan.

In perspective, it becomes apparent that there is probably no "hospital science" as such just as there is probably no "medical science". The eclectic body of knowledge which is emerging under the name of "hospital research" or "medical science" is based on discoveries in the more fundamental sciences and the application of their methods to the problems of the hospital.

CONCENTRATED RESEARCH AREAS

Current hospital research is concentrated in four major problem areas:

1. The development of new patterns of organizing patient services.

2. The development of more efficient hospital practice, such as, improved methods of operation, personnel procedure and functional efficiency of the hospital, including structure, layout, equipment and administrative organization.

3. The development of better means of evaluating the quality of patient care.

4. The study of factors which affect the health of people, hospital use, the nature of the patient load, the services needed and the cost and means of financing patient care.

The studies cited *below* illustrate current research in the four major problem areas.

Studies devoted to new patterns of organizing patient services cover such areas as (a) progressive patient care, with its philosophy of tailoring hospital services to the medical and nursing needs of patients; (b) patterns of coordinating hospital services with other community services, with smaller rural hospitals, with larger hospitals and medical schools and within the community between the general hospital and other types of institutions, both hospital and nonhospital, which provide long-term care; (c) the organization of physicians' services within and outside of the hospital and its effect on efficient use of professional and patient time.

The problems of obtaining the best use of expensive equipment and facilities in densely populated areas are being studied with the view of eliminating unnecessary duplication. This has taken the direction of seeking means of organizing planned cooperation among communities within a region and better mechanisms for achieving sharing of services and for providing for continuity of patient care between institutions.

The relationship between volun-

tary and publicly owned hospitals and the problem of arriving at principles which will enable each to provide the community with improved services is another aspect of organizing new patterns of patient service.

HOSPITAL PRACTICE IMPROVED

Research into the development of more efficient hospital practice has covered a rather wide area. Some studies seem primarily concerned with improvement of methods and work simplification. These have included studies of (1) business records, (2) the problem of congestion in waiting rooms and in outpatient clinics, (3) the indexing of medical records, (4) systematic organization of information on blood and tissue banks, (5 the legal aspects of hospital operation and (6) improved techniques of inservice training.

Related to these are a series of studies concerned with personnel need involving: training of personnel, upgrading through training of paramedical hospital personnel, better means of recruiting and training personnel in short supply.

Other studies are concerned with hospital design, hospital engineering and hospital equpment in terms of safety, functional layout and more efficient operation. Special hospital functions studied have been recovery rooms, the oxygen supply to patients' rooms, hospital communication systems and the control of fire and explosion hazards.

STAFF-PATIENT RELATIONS OBSERVED

Interpersonal relationships between staff members in a hospital and their influence on patient care have not been overlooked. Some studies have been concerned with stressful situations and their consequences on patients' responses to hospital care.

Improving the selection of students entering graduate training in hospital administration has been explored through a survey of a number of hospitals to determine existing practices. From an evaluation of these findings, it may be possible to establish desired performance standards.

Other studies have aimed at developing instruments capable of measuring the quality of patient care. These involve creating measurable criteria for evaluating such care. There have also been attempts to determine how patients can benefit from particular kinds of services and to what degree, especially in rehabilitation, long-term and outpatient care. The inadequacy of criteria by which to judge quality of care has led to an attempt to find characteristic levels of frequency for various clinical procedures as a basis for identifying quality of care.

Factors which affect the health of people, and consequently hospital use, influence both the patient load and services needed. Studies in this area are probably the most numerous. Concern with the number and distribution of hospital beds has led to studies in depth on factors which influence use, the nature of hospital programs and services needed and their consequent effect on health levels. Among some of the factors studied have been morbidity rates, demographic and population characteristics, methods of financing hospital and medical care, the effect of changes in incidence of disease on patterns of hospital use and the social, economic, psychological and cultural characteristics of hospital users. More aged individuals in our population, and the consequent need for providing health and hospital care for the ill aged, have led to studies of the needs of such patients and how they may be met through inpatient and outpatient facilities, home care, convalescent care, nursing homes and chronic disease facilities. Concern with the rise in the cost of hospital care has led to studies exploring such influences on hospital use and hospital costs as the physician, method of coverage, patient demand and social and economic factors.

HOSPITAL RESEARCH DEFINED

Despite the fact that the operation of hospitals is a complex function, there are several unique characteristics which may be considered common denominators. Some examples are:

1. The division of authority between the physician who makes the final determination concerning the care of the individual patient and the hospital management responsible for planning and organizing hospital operation.

2. The general and ambiguous nature of hospital goals which has resulted in differences in interpretation and methods for their attainment.

3. The tendency for the hospital's role to be influenced by numerous external forces (i.e., social, economic and cultural).

4. The necessity of foregoing a specific goal, if, in its execution, there is a conflict with still another objective. (For example, one goal may be the efficient economic operation of a hospital which is often in conflict with the goal of providing the highest quality of patient care.)

Because hospitals have their wide variations, it is important to recognize that generalizations resulting from research only hold true for certain types of institutions. Nevertheless, it is important to emphasize that certain influences, such as those noted above, can be described and are predictable.

Hospital research can be defined, then, as research on the conditions under which hospital goals are formulated and changed, promoted, or hindered.

Hospital research—as we see it—is the application of scientific method to resolving administrative and operational problems besetting hospitals and to developing specific techniques and methods for improving the capacity of hospitals to meet their responsibilities to their patients and to the community.

The elimination of bottlenecks which stand in the way of optimum patient care, the development of more efficient methods of patient care, the improved design of physical plants, the more effective coordination of community health resources—all these are aspects of hospital research. Since such research seeks greater efficiency, it has an obvious bearing on hospital costs.

Hospital research is clearly distinguishable from medical research, but, at the same time, intimately related to it. New knowledge of human disease, new therapies, new cures can be employed with optimum effectiveness only if the environment in which they are applied is itself efficient.

The hospital is the environment in which new therapies and new cures are most frequently employed.

A systematic approach to the solution of hospital problems depends upon the development of more precise research tools, including classification, research techniques, design of experiments, procedures and methods of research. These, in turn, depend on research developments in other sciences basic to medical and hospital research. Hospital research will in the long run benefit from progress in other sciences. We may find that more certain progress can in the long run be achieved through comparatively greater financial support to promising theoretical and fundamental studies than will be achieved by an equal financial support of applied research.

APPLIED HOSPITAL RESEARCH

Applied research is directed toward practical application of scientific method to specific problems of a particular field, area, or institution. It seems, chiefly, to furnish reliable data on which to base decisions concerning practices, actions and programs. A perceptive investigator adapting the research tools of the social sciences, numerical analysis, statistical methods, or operations research may demonstrate the value of systematically approaching the testing of existing practices through well-defined experiments which are verifiable through independent repetition.

Developmental research in hospitals involves the development and testing of materials, hospital techniques, systems, procedures and methods specifically applicable to hospital practices. One researcher* for example, has evaluated the potential of automating a wide variety of hospital activities by introducing various automatic devices into hospital activities and selecting the three or four most promising activities for study in detail to determine their economic and technological feasibility. The study was designed to develop information on types of current available equipment worth adapting to hospital use, technically possible equipment worth developing for special use in hospitals and on types of data needed to ascertain the likelihood of successfully developing automatic procedures in other hospital activities.

*Blumberg, M. S., Hospital automation: the needs and the prospects. HOSPITALS, J.A.H.A. 35:34 Aug. 1, 1961.

DEMONSTRATION PROJECTS

It is not the purpose of hospital research to provide service, but rather to produce a body of verifiable knowledge which can be generalized. Demonstrations, on the other hand, are deliberately service-oriented. They are directed toward more localized and specific purposes, usually to "demonstrate" on the basis of verified knowledge, how a particular practice or service can be carried out. There can be demonstrations whose values are so apparent that the need for proving the worth of the procedure is not necessary. The purpose of the demonstration is primarily one of introducing into the setting the necessary procedures under controlled conditions so that the staff may learn to carry them out correctly, and the procedures and new types of personnel needed may be incorporated into an organization which has had no previous experience with them. There is always in the background the implication that the project is of limited duration. It is usually expected that once the procedure is established, it will be absorbed within the organization's regular budget. A demonstration also serves the purpose of a model to be used by others.

Another type of demonstration involves techniques and procedures which have been developed and tested in limited situations, or only in "pilot" form. The purpose of the demonstration may be to test the procedure under a variety of working conditions in which controls are introduced, to test the effect of variations in administration, organization, structural design, economic feasibility, or similar variations on the utility of the procedure. Such demonstrations imply strict experimental control.

Fundamental to long-range progress is the need for investigators who are well trained in conducting research in the problems of the hospital. Other research specialists can contribute much to the development of hospital and health facility research. They must, however, be given more opportunity to become familiar with hospital operations if the more critical problems are to be studied. Hospital administrators with inquiring minds and a dissatisfaction with the status quo must be provided with a knowledge of research methodology and experience with research problems. Present training resources for producing such investigators are scarce. Training now offered in most schools of hospital administration neither attracts nor trains research-minded people. Many universities have resources which can be organized into multidisciplinary programs, including hospital research. Thus, students can be provided with research training.

FEDERAL SUPPORT

Prior to 1920, the major concern of persons active in the hospital fields appeared to have been the extension of hospital services to patients and the development of minimum standards of services. Changes from these standards came into being as a result of the Flexner report on medical education.

After 1920, concern arose about the number and distribution of hospital beds needed in relation to services. In 1921, the Public Health Committee of the New York Academy of Medicine published results of a year's study of 180 nonprofit general hospitals in the greater New York area. This study was one of the earliest formal attempts to determine need for general hospital beds. It also recognized the need for a central agency to coordinate the use of hospital beds within a specific population area.

Closely related to the question of bed needs was the problem of where to put them. There were some who felt that "one large hospital in a community can do the job better and more efficiently than several small ones". This led to studies on the methods of measuring bed needs and the development of bed-population ratios. Concern with measuring bed needs led to attempts to relate levels of hospital utilization and the distribution of beds to bed needs. The factors considered were broad and explored the conditions which

affect the development of a hospital. Some 300 groups of factors can be listed from the literature. These range from the availability of physicians and professional personnel to the characteristics of the population served. Despite the voluminous literature, the index reference to "research as a hospital function" in *Hospital Care in the United States,* the important postwar study conducted by the Commission on Hospital Care, refers only to clinical research.

It was not until two years later that legislation was introduced "authorizing the Surgeon General to conduct and make grants for the conduct of research, experiments, and demonstrations relating to the effective development and utilization of hospital services, facilities and resources and to promote the coordination of such experiments and demonstrations and the useful application of their results."

Curiously, testimony at the time emphasized the coordinated hospital system as the chief means of improving the quality of hospital and medical care. Smaller institutions were to be affiliated with, and obtain services from, the larger hospitals. This legislation, passed in 1949, became Public Law 380, 81st Congress, which authorized a grant ceiling of $1.2 million annually for hospital research.

REQUESTS EXCEED FUNDS

To date, 210 applications for extramural research have been received requesting approximately $26 million in funds. With the funds available, 76 projects in the amount of $8,014,897 have been activated under this program. Of these projects, 40 have been completed, amounting to $3,708,293. The 36 "ongoing" projects amount to $4,306,604. Although the program has been in operation for approximately five years, some significant contributions have resulted already.

Studies on progressive patient care have explored means of fitting hospital services to the needs of a particular patient's illness. An analysis of the organizational structure necessary to provide effective coordination of hospital, health and welfare activities in Puerto Rico has provided useful information on the organizational problems which occur when a new organizational structure for providing health services is evolved.

HOSPITAL USE STUDIED

A hospital use study has shown that the persons with comprehensive coverage use hospitals less than persons having hospital coverage only. Comprehensive coverage apparently encourages more efficient use of hospital facilities. A study of the legal aspects of hospital operation has resulted in the publication of a legal guide for administrators and the formation of a new health law center, the first of its kind in the nation. A study of the improvement of hospital services by the American College of Physicians limited to the practice of internal medicine in hospitals has resulted in a guide for hospital medical care appraisal committees.

A national survey and analysis conducted by the Joint Blood Council resulted in the development and publication of standards for collecting, storing, processing and distributing whole blood and its derivatives. Further, this study has provided, for the first time, complete nation-wide information on blood, tissue and mothers' milk banks for use under both normal and disaster conditions.

A methods improvement study conducted in various hospitals resulted in both dollar and man-hour savings. Guidelines for the initiation and conduct of similar programs using work simplification and other techniques are to be made available to other hospitals.

Outpatient studies have led to the development of guidelines clarifying conditions under which optimum use can be made of emergency room facilities. Additionally, it was demonstrated that hospital staff attitudes directly affect patterns of patient usage of outpatient facilities.

A curriculum study has demonstrated the practicability of interdisciplinary postgraduate training in health facilities research. The first doctoral graduates of this three-year program were graduated in June 1961. These students are prepared to design and conduct independently advanced studies, research and experiments in the field of hospital and medical facilities utilization.

A study of personnel systems and methods as they apply to the hospital situation has shown that use of suggested procedures can substantially reduce turnover which is one of the more costly problems faced by hospital administrators. One study has assessed the potentials of automation in increasing the efficiency of hospital services. This assessment has been prepared for publication together with data on types of equipment available. A study is currently projected toward development of model specifications and guidelines for the construction of children's medical centers and facilities in general hospitals.

FUTURE GOALS

In analyzing existing hospital research, irrespective of the source of support, one is impressed by the scope and range of projects under way. Nevertheless, it is clear that a tradition and literature of hospital research must be created if we are to bring to bear on the problems of the hospital the methods and skills inherent in the scientific approach. Much hospital research consists of fact-finding primarily concerned with relating measures of level of health of given populations to need, use and availability of health facilities. The work is of a survey nature, designed to extract from a mass of facts the forces which influence hospital use and patient care.

Some well-designed studies are concerned with interpersonal relationships and with the social, psychological and economic factors which affect hospital practices and patient care. There is concern with better means of financing hospital and health care. Some excellent, critical reviews of the literature of financing health care have led to some economic and social analysis.

Hospital research, nevertheless, is still characterized by a lack of well designed studies which promise results upon which to develop broadly accepted generalizations. This stems from the fact that hospital research needs to develop trained research people who will create new research tools

which can be applied to hospital problems. We need also a more systematic approach to hospital research which will emphasize guidelines and priorities for the kinds of hospital research needed. These are vital if we are to make best use of the sums presently available and lift the quality of hospital research.

Fundamental to the dissemination of research results is systematic knowledge of the kinds of hospital research which are being carried out and knowledge of where it is published so that those interested may gain access to it. There has been to date no systematic abstracting of hospital research. The Health Information Foundation has published for the past seven years *An Inventory of Social and Economic Research in Health.* The American Hospital Association publishes *The Hospital Planning Abstract Service.* The abstracts are not limited to research reports but include surveys, inventories of facilities, evalua-

(Continued on page 104)

GUIDELINES FOR FEDERALLY SUPPORTED HEALTH FACILITIES RESEARCH

HEALTH FACILITIES research received new impetus —a long-sought goal of the Hill-Burton program of the United States Public Health Service—with the passage of the Community Health Services and Facilities Act of 1961. The new legislation makes it possible for Congress to appropriate as much as $10 million annually for hospital research and demonstration. The ceiling and annual appropriation formerly was only $1.2 million. Besides authorizing more than eight times more money, the law liberalizes the terms so that, for the first time, these funds can be used to purchase special equipment or construct special facilities of an experimental nature. For the current fiscal year $8,113,000 is available for the purpose of the research and demonstration program.

Guidelines approved by the Federal Hospital Council in anticipation of congressional action (see accompanying article) are being used by the Council in its review of applications thus far received. These guides, which were formulated in consultation with the Health Services Research Study Section, are designed to promote the effective operation of the health facilities research program. They are based on experience since fiscal 1956 when Hill-Burton funds became available for hospital research and demonstration projects. As of Nov. 1, 1961, grants totaling $8,014,897 have been awarded. These provide for 76 extramural research projects, 40 of which have been completed.

The program, administered by the Division of Hospital and Medical Facilities of the Public Health Service, utilizes certain resources of the National Institutes of Health for technical review of applications.

Public and private nonprofit institutions and groups —including political subdivisions, universities and hospitals—are eligible to apply for funds.

RESEARCH AND DEMONSTRATION GRANTS

The types of projects included under the research and demonstration category (described in detail in the accompanying article) are outlined below:

Basic and Applied Hospital Research—Basic hospital research provides general knowledge aimed at broadening the theoretical foundation for hospital studies. Research in the biological, social and physical sciences promises to assist in providing answers to hospital problems.

Applied hospital research applies the scientific method to specific operational problems. Examples include the improvement, correction, development and testing of forms of hospital organization and internal management and of practices affecting the quality of hospital care.

Exploratory and Pilot Studies—Exploratory and pilot studies are useful as a means of developing new methods of performing hospital research and of testing unorthodox approaches and ideas under conditions providing a substantial degree of freedom.

These relatively small, short-term grants are made to assist in developing well-structured research projects, or to permit limited testing of a hypothesis before a research application involving a considerable expenditure is submitted.

Demonstration with Built-in Evaluation—When a procedure, practice, or method of service has been tested and found useful under one set of conditions, it is often desirable to test its usefulness in other situations. Evaluation is crucial to demonstrations of this type. In a demonstration with built-in evaluation, the aim is to show the applicability to a new situation of a procedure, practice, or method of service which has proved useful elsewhere. Written evaluations of such projects have considerable value to other workers in the field.

For definitive evaluation of this type of demonstration, three things are necessary: precise and specific definition of goals; a base line against which to measure progress; and a measure of the extent to which the goals were realized.

Service Demonstrations—Service demonstrations are projects designed to reduce the lag between the development and adoption of improved techniques and methodologies for planning health facilities and improvements in the practices, procedures and patterns of their organization and operation. Since these

demonstrations are directed toward speeding up the translation of accepted practices and procedures into actuality, detailed evaluation of results is not required.

Demonstrations in area-wide planning of hospital and related health facilities are included in this category.

Research Development Projects—Research development projects expand the total health facilities research effort. This is accomplished in two ways: first, through relatively small grants of "seed money" to institutions which have potential for health facilities research; and second, through grants to established investigators and centers which have ongoing research programs to provide broader opportunities for research experience and training.

"Seed" Grants—To be eligible for "seed" grants, an institution must provide a potentially favorable setting for hospital research. Trained personnel interested in conducting such research must be available. The medical, hospital administration, statistical and other competencies necessary to hospital research must either exist within the institution or be available through cooperative arrangements.

Seed grants are intended to: (1) create focal points of hospital research in research institutions not now carrying out such projects; and (2) encourage recruitment of competent people from basic disciplines to conduct research in hospitals and other medical facilities.

Support for Established Investigators and Centers—Established institutions with experienced investigators having long-range programs in hospital research may be awarded grants which will encourage the training of additional workers (predoctoral and postdoctoral fellows) in their ongoing research program.

In evaluating such projects the following factors are considered: existence of an ongoing research program; program competence of the person responsible for this program (background, training, productivity); suitability of environment for inquiry and learning (educational and research policies of the institution, attitudes toward the proposed grant or program); quality of curriculum and faculty; practicability of intrainstitutional and interinstitutional cooperative arrangements, including research training, interdepartmental research activity and community relationships; number, quality and source of potential graduate students in the setting; success and competence of alumni; program objectives and plans (ideas); and the institution's contribution to program (finance, facilities, permanence).

TRAINING POTENTIAL PROVIDED

In addition to their research and demonstration purposes, many of the projects described above provide opportunities for training. Their training potential is weighed in evaluating an application. When training opportunities exist, the application should show: (1) specific training goals in terms of the anticipated contribution to the research effort which can be attained; (2) the organization of the training program; and (3) the institutional setting and the names of persons responsible for administering the training program.

Eligible Costs—The amount of a research and demonstration grant is determined by the appropriateness of the budget in relation to the scope of the project. There are no matching requirements.

CONSTRUCTION AND EQUIPMENT GRANTS

The newly authorized grants include two types of projects: experimental and demonstration construction and the acquisition of experimental and demonstration equipment. Both types of projects require that the applicant include plans for an evaluation or research study of the proposed project. This is necessary even when funds for this purpose will be sought elsewhere. The adequacy of this evaluation will be an important consideration in reviewing the applications.

Experimental and demonstration construction projects have several purposes. For example, there may be experimentation in the functional layout, design and construction of hospitals and other medical facilities. Demonstration construction projects may show the use and feasibility of experimental designs necessary to incorporate new patterns of organization and operation into hospitals and other medical facilities.

Projects for acquiring equipment must provide for experimentation in or demonstration of the use of equipment items in hospitals and other medical facilities.

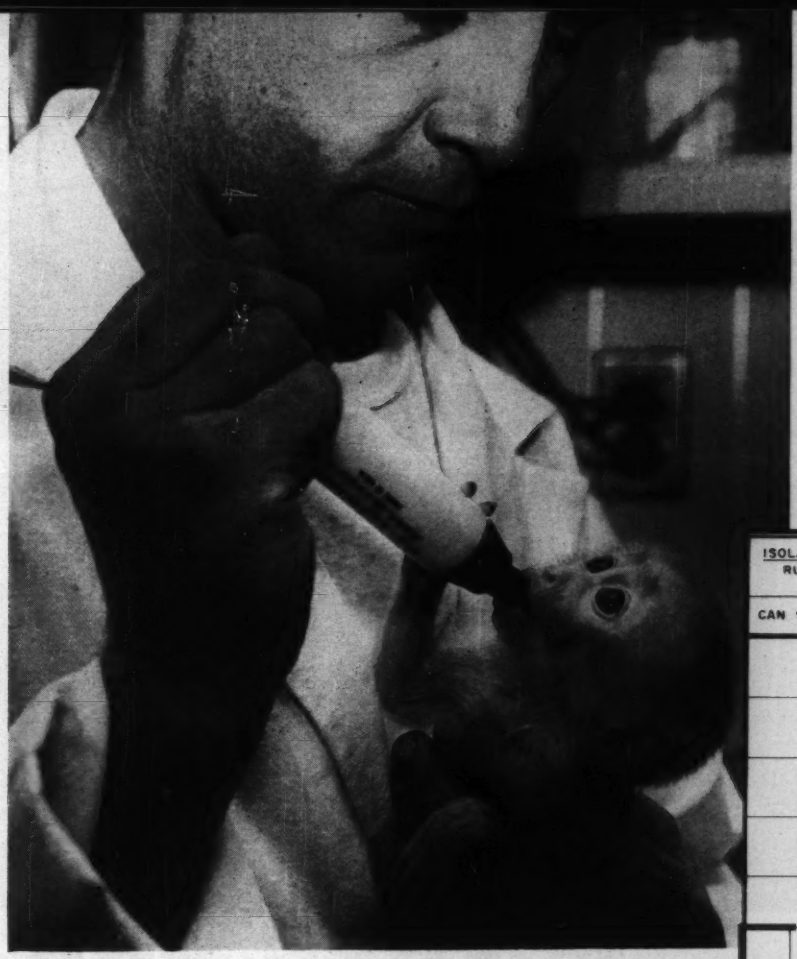
Eligible Costs—A grant may be given only for that portion of a facility shown to be of an experimental or demonstration nature. Therefore, only those costs of space, facilities, services and equipment determined to be reasonably attributable to the experimental and demonstration construction or equipment project are eligible for federal funds. The federal share of the funds may not exceed two-thirds of the eligible costs. The sum awarded the applicant for experimental or demonstration construction is usually paid in installments, consistent with construction progress.

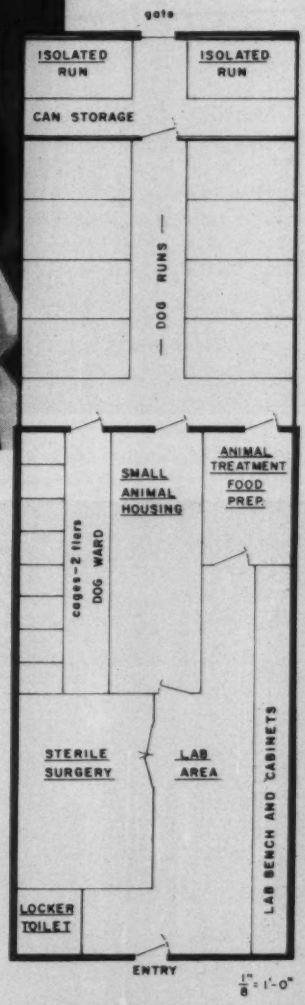
The amount of a grant to support an evaluation or research study is determined by the appropriateness of the budget in relation to the scope of the project. There are no matching requirements for the evaluation or research study.

HOW TO APPLY FOR A GRANT

Application Form—Application for all categories of grants is made on Form PHS-398, Application for Research Grants. These forms, along with special instructions for experimental or demonstration construction or equipment projects, may be obtained from the Division of Hospital and Medical Facilities, U. S. Public Health Service, Washington 25, D.C. Application forms for a research or demonstration grant also may be obtained from the Division of Research Grants, National Institutes of Health, U.S. Public Health Service, Bethesda, Maryland.

Consultative Services—Representatives of the U.S. Public Health Service are available for consultation. Inquiries should be addressed to Jack C. Haldeman, M.D., chief, Division of Hospital and Medical Facilities, U.S. Public Health Service, Washington 25, D.C. —J.C.H. ■





(PHOTO) Laboratory animal technicians need to know the techniques involved in caring for newborn animals, including feeding and handling. FIG. 1 (floor plan) Outline diagram of St. Jude's Hospital, Fullerton, Calif., animal facility and research building.

Caring for research animals in hospital laboratories

by BENNETT J. COHEN, D.V.M., Ph.D.

Hospital research laboratories share a common interest with other medical research institutions in providing the best possible care for laboratory animals, the author states. He discusses present standards requiring professional direction of laboratory facilities and stresses the need for technically competent animal care personnel.

HOSPITAL research laboratories have played an increasingly important role in the national research effort in recent years. This increased participation in research has posed new problems and challenges for hospital administrators. It has become necessary to accommodate activities never before undertaken on a major scale in hospital facilities. One of these important activities is animal experi-

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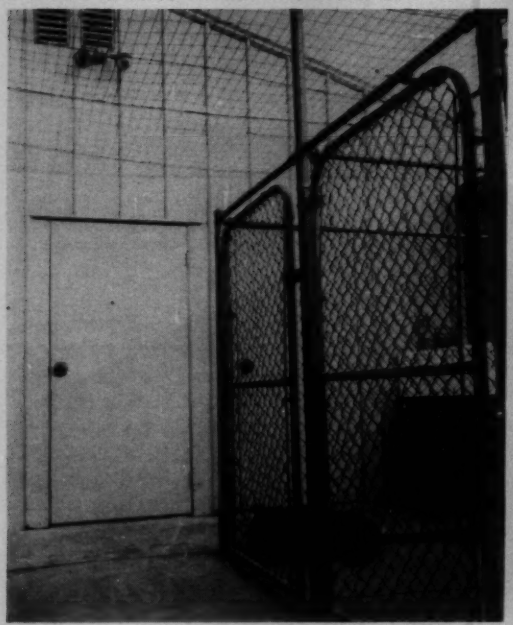
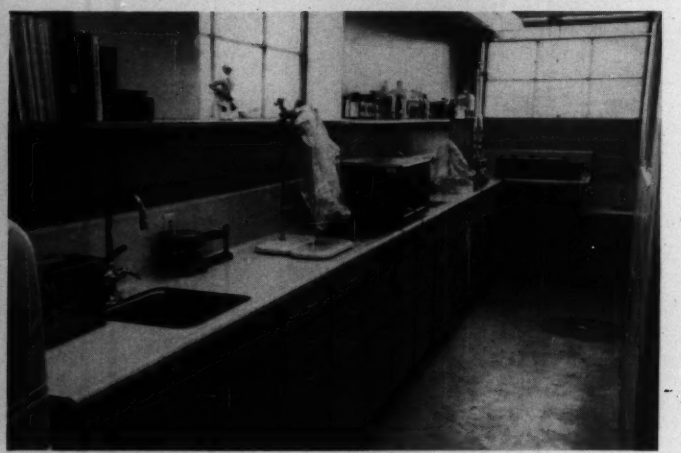
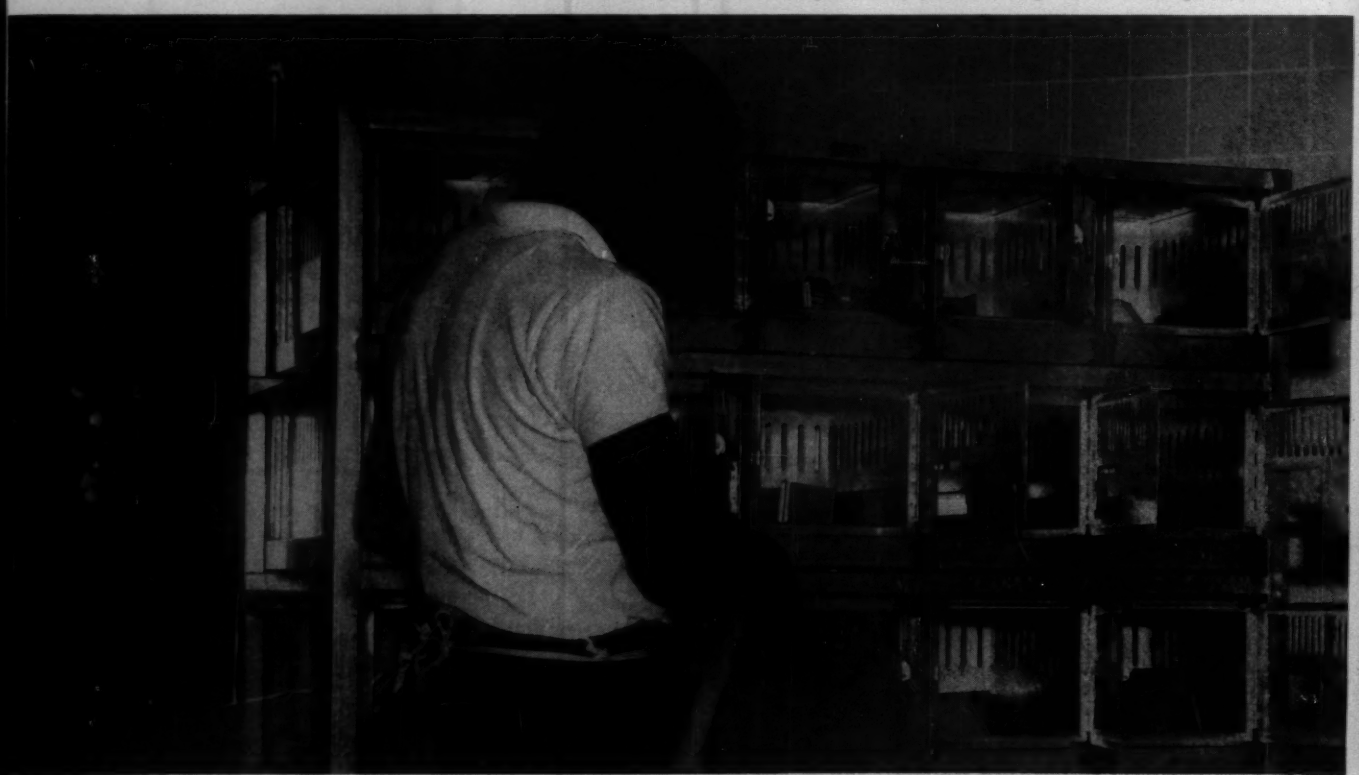
(BELOW) Outside animal runs at St. Jude's Hospital are spacious as well as easy to maintain. Concrete flooring can be hosed down easily. (UPPER RIGHT) A cardioscript machine (left) and a mechanical "heart", the control panel for which is at right, are two of the more complex devices with which the animal research laboratory at St. Jude's Hospital is equipped. (LOWER RIGHT) The research animal care center at the St. Jude's Hospital, Fullerton, Calif., includes a fully equipped biochemistry laboratory.





FACILITIES for cage cleaning should include a washing machine for smaller cages and steam cleaning equipment for cages and equipment too large for the washing machine.



mentation. Some of the essential considerations in planning for the proper use and care of experimental animals are reviewed in this article to assist hospital officials responsible for these programs.

The specialized discipline of laboratory animal care has evolved within the past 15 years.[1] This development is an outgrowth of greatly increased public support of medical research. It also reflects the increasing specialization of research and its tools.

Health disciplines conduct specialized professional activities in accordance with appropriate codes of practice. For example, the Standards of the Joint Commission on Accreditation of Hospitals, an authoritative reference on proper hospital practices, guide member hospitals of the American Hospital Association.[2] They assure operation of hospitals in the public interest.

ANIMAL CARE STANDARDS

Similarly, laboratory animal facilities must operate in accordance with professionally acceptable standards. The Animal Care Panel, the national organization of institutions and individuals in laboratory animal care, currently is developing these standards, based on the following principles:

1. Professionally qualified individuals shall direct the care and management of laboratory animals in research institutions.

2. Animal technicians shall be properly trained in laboratory animal care.

3. Physical facilities and methods of care shall permit housing of animals in a state of well-being and comfort.

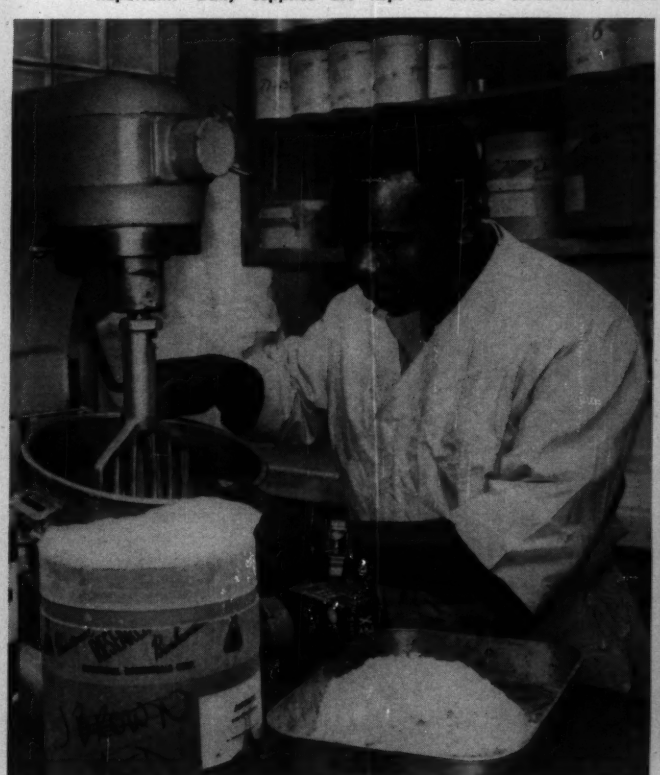
A voluntary certification program for laboratory animal facilities based on these standards has been announced[3] and will be in full operation in 1962. It demonstrates that research institutions wish to provide the best possible care for laboratory animals. Research hospitals are an integral part of the scientific community and undoubtedly will participate in this important national program.

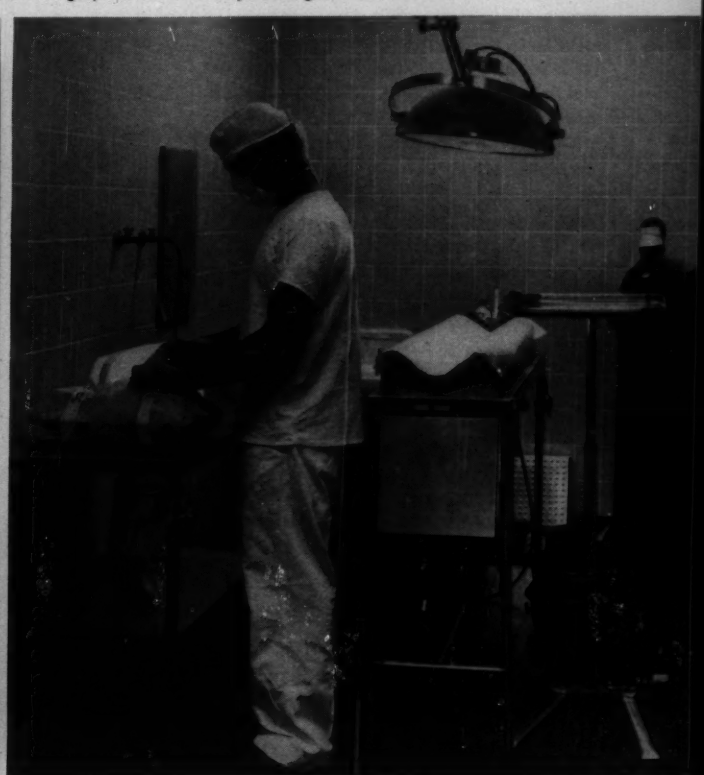
The nature and extent of the direction needed for laboratory animal facilities depend on their size and on the scope of the experimentation programs. Most large institutions, such as medical schools, employ veterinarians with specialized training in laboratory animal medicine.[1,4] The veterinarian is responsible for the professional and administrative management of the facilities. He also provides veterinary services and consultation. As a member of the faculty, he teaches in his area of academic competence and conducts research in a related field.

In some hospitals and affiliated research institutes, the numbers of animals used are sufficiently large enough to justify employment of a full-time laboratory animal specialist. Several Veterans Administration hospitals, as well as privately supported hospitals, have organized their animal facilities under veterinary direction. As in the medical schools, these positions carry appropriate research or academic status and offer a satisfying

(Continued on next page)

(LEFT) Compounding synthetic diets to feed laboratory animals is important. Daily supplies are kept in closed containers. (RIGHT) The use of laboratory animals in research also requires a well equipped surgery similar to a hospital surgical unit.





professional career opportunity. The American College of Laboratory Animal Medicine* maintains a registry of candidates for positions in this field and lists institutions with available positions.

In most hospitals, however, the experimentation programs are modest in size, and it is not feasible to employ a full-time laboratory animal specialist. Nevertheless, a need for professional direction is recognized. This need can be satisfied in several ways:

1. A member of the hospital research staff, a physician or biologist, can serve as director of the animal facility, with a committee to assist him as necessary to determine operating policies. The director obviously should be experienced in the management of animal colonies and in animal experimentation. He must be informed about organization in this field and be familiar with the pertinent literature. The director should provide the leadership necessary to assure high quality animal care.

2. A laboratory animal specialist from a local medical school may be available as a consultant to hospitals having a direct or indirect affiliation with the school. This person can aid the physician or biologist director by defining the requirements for a sound animal care program and by rendering veterinary medical services in connection with specific research projects.

3. In many community hospitals, the dog is used almost exclusively as the experimental animal. The research programs involve surgical procedures and require survival of the experimental subjects. Leading veterinary practitioners in the community have broad experience in the medical management and care of animal surgical patients. Some of them may be in a position to provide professional consultation. The American Animal Hospital Association** maintains a registry of member hospitals. These hospitals meet the standards of the AAHA, standards which are comparable in many respects to those of the American Hospital Association.

*Robert J. Flynn, D.V.M., Secretary, Argonne, Ill.

**3920 East Jackson Blvd., Elkhart, Ind.

Comfortable housing for experimental animals requires physical facilities and methods of care which permit normal growth and development and the maintenance of animals in good health. The design of animal facilities to provide comfortable housing has been discussed in several recent publications.[5-7]

ANIMAL HOUSING

For conventional housing of most mammalian species, extremes of temperature and humidity must be avoided and adequate draft-free ventilation and glare-free lighting is necessary. Generally, in indoor facilities, animal room temperature should be maintained between 72° and 80°F., and relative humidity should be 40 to 60 per cent. Ten to 15 complete air changes per hour (not recirculated) are desirable, and approximately 40 foot-candles of light should be provided. However, these general suggestions may vary considerably, depending on local requirements and the specific use of the facilities.

Cleanliness is an essential element in the proper care of animals and is mandatory in laboratory animal facilities. Accordingly, regardless of their size, the facilities should provide for convenient and

(ABOVE) Anesthesia equipment for surgery involving research animals is similar to that used in hospital surgical suites. This piece of equipment is used at the Memorial Hospital of Long Beach.

(OPPOSITE PAGE) Animal quarters at the Memorial Hospital of Long Beach (Calif.) are in a well lighted room, with cages elevated for ease in cleaning and in feeding the animals.

(BELOW) Technical competence to carry out prescribed postoperative care procedures, such as administering drugs and intravenous injections, is another responsibility of the hospital vivarium.

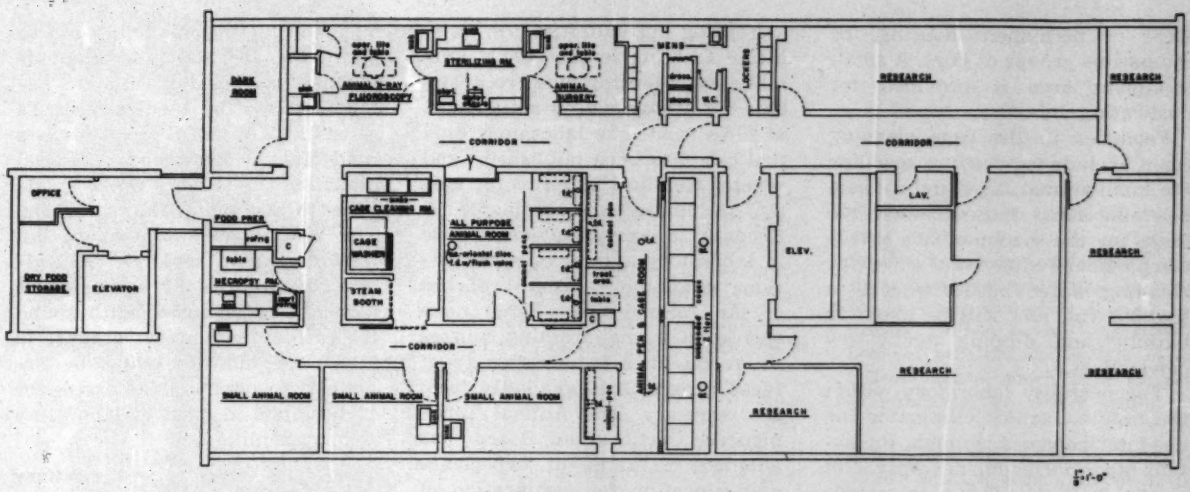
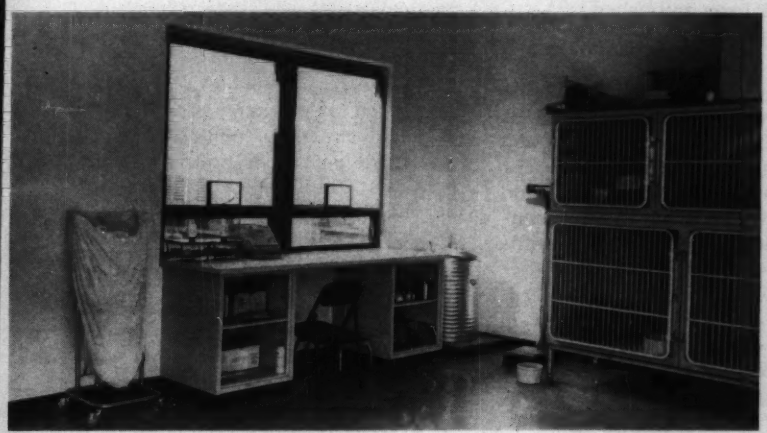


Fig. 2—Outline diagram of the animal facility at Mt. Sinai Hospital, Los Angeles.



efficient cleaning and for effective control of vermin, rodents and other pests. Additional requirements in a complete facility include areas for storage and preparation of animal diets; for sanitary disposal of waste; and for cleaning, washing and disinfecting of animal cages and equipment. Other mandatory services are the provision of daily care; provision for diagnosis, control and treatment of nonexperimentally induced animal diseases; and if surgery is performed, provision of operative and postoperative facilities appropriate for the species and purpose of the work.

Two examples will serve to illustrate different types of hospital animal facilities. St. Jude's Hospital, a 120-bed community hospital in Fullerton, Calif., recently constructed a compact 800-square-foot research building, with an additional 600 square feet for outdoor animal runs (see Figure 1, p. 43). The cage room and runs provide for approximately 24 dogs. A separate room is available for housing "small animals," or for expanding the dog housing capacity to 45. The building includes laboratory facilities and an operating room for sterile surgery. A local veterinary practitioner designed this functional facility in conjunction with the hospital staff and serves as its consultant director.*

The animal facility planned for the Halper Clinic Building of the Mt. Sinai Hospital, Los Angeles (see Figure 2, above), illustrates important design considerations in a larger urban facility.* The clinic building is a new six-story structure, with the top three floors to be devoted exclusively to research. The animal facility is on the sixth floor, occupying approximately 3000 square feet, which is approximately 20 per cent of the total research space in the building.

The animal housing area is physically separated from the laboratory areas by its top floor location and by a double-door entry vestibule from the research space on the same floor. The facility is separately ventilated and air conditioned.

The surgery unit is located adjacent to the animal housing area, with direct access across a corridor to the room housing postsurgical dogs. A shower-locker room is provided for animal technicians and research workers.

FLEXIBLE FACILITIES PROVIDED

The facility provides flexibility in that rooms are provided for both "large" and "small" animals. The research programs may require the use of calves, goats and sheep. Accordingly, pens are provided in an "all purpose room". Most of the time these pens will serve for isolating and conditioning newly received dogs, prior to their transfer to the main dog housing area. The pens in the largest animal room will provide out-of-cage exercise

*The laboratory animal facilities of St. Jude's Hospital are described through the courtesy of Frederick P. Sattler, D.V.M., Fullerton, Calif., and Thomas Jones, M.D., director of research.

*Daniel H. Simmons, M.D., Ph.D., director of research, Mt. Sinai Hospital, Los Angeles, authorized the description of the hospital's animal facilities.

areas or permanent housing for compatible groups of dogs. A small treatment area is provided for medicating animals.

Facilities in the cage cleaning room include a washing machine for small animal cages and a steam booth for racks and equipment too large for the machine. The three-compartment sink will serve for cleaning water bottles and as a soaking vat, and will be used for bathing and dipping newly received dogs.

The necropsy laboratory within the animal facility eliminates the need to transport animals to distant laboratories for necropsy. Not shown in Figure 2 is a crematory and incinerator for animal carcasses and soiled bedding. This facility is located on the roof, directly accessible via the service elevator.

Only a small food preparation "corner" has been planned, since commercially available rations will be used primarily. The main dry food storage room is located adjacent to the service elevator. Daily food supplies will be kept in closed containers in the animal rooms.

The service elevator will be used only for delivery of supplies and animal transport to the research floors below. It will not be accessible to the general public.

The small office is for the chief animal technician. This office will function as the record center for the facility.

TRAINING TECHNICIANS

The proper care of experimental animals requires skilled, knowledgeable personnel. Animal technicians must understand the basic principles of laboratory animal husbandry and how to apply them. They must acquire skills in humane handling and restraint of animals. They must learn to recognize normal animals and deviations from normal. At a more advanced level, they must have the technical competence to carry out prescribed postoperative care. In short, laboratory animal care requires specific technical skills; it is more than a simple custodial activity.

The director of the animal facility should be familiar with the increasing opportunities for technician training in laboratory animal care. Teaching aids are available for training programs. A list of films related to laboratory animal care has been published,[8] and several technical bulletins for animal technicians are obtainable.[9-11] Recently, a correspondence course in laboratory animal care has become available.[12] Local branches of the Animal Care Panel have sponsored formal training courses in several cities. Information about these programs is available from the secretary. The Animal Technician's Certification Board has adopted standards of experience and education for certification of junior and senior animal technicians and supervisors. These standards have been published.[13,14]

FINANCIAL CONSIDERATIONS

Grants provide most of the financial support for animal facilities. Research grants from federal and private sources provide for the purchase and care of animals and for necessary equipment and supplies. Some of the indirect costs may be covered as well. A per diem recharge system commonly is used to pay for animal care in medical schools. However, a single annual assessment against each grant might be a less cumbersome approach in a smaller hospital animal facility. The assessments would vary according to the investigators' use of animals. The true cost of laboratory animal care frequently is underestimated in grant requests, and items such as the cost of sick leave and vacations for employees, depreciation of equipment and maintenance of the facility are not considered. Hospital budget officers should review grant applications with investigators before they are filed to make certain that adequate funds for animal care are provided.

Many institutions, including hospitals, recently have been able to construct research facilities, with the aid of matching funds from the federal health research facilities program. A unique cooperative effort enabled one medical school to build a new research kennel.[15] WARDS (Welfare of Animals used for Research in Drugs and Surgery) is a Washington, D.C., humane organization dedicated to improving facilities and methods for the care of dogs used in research. With the medical school's assistance, WARDS sponsored a fund-raising campaign. Federal matching funds were made available to complete the financing. The WARDS example shows that the interests of research and animal welfare can be combined to advance both causes. With sound leadership, volunteer groups in other communities could be organized to offer similar assistance to hospitals in need of laboratory animal facilities.

SUMMARY

Hospital research laboratories share a common interest with other medical research institutions in providing the best possible care for laboratory animals. Present standards require professional direction of laboratory animal facilities, technically competent animal care personnel and physical facilities and methods of care to permit the housing of animals in a state of well-being and comfort. Careful financial planning is essential to assure the necessary funds to meet these standards. ■

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15. Research kennels at Georgetown, *J.A.M.A.* 167:872, 1958.

COMMUNITY SURVEY PROVIDES A DOUBLE-BARRELED SURPRISE

by ROBERT T. PATIERNO

According to the author, the results of a public opinion survey on community knowledge of hospital operations, conducted prior to a successful fund-raising campaign, showed community interest in and awareness of hospital activities, as well as serious misconceptions which were corrected by publishing the survey results.

THE public may be better informed than ever before about health and medicine in general, but when it comes to knowing about what goes on in their own community hospitals, the gaps in public knowledge are still many and wide.

At Hanover (Pa.) General Hospital, some of these gaps were discovered in the nick of time. A fund-raising campaign for a new hospital wing was about to begin, and it was advised that a preliminary poll of public opinion be conducted to find out what residents of the area knew about Hanover General and what they thought of it.

Some widespread and serious misconceptions were disclosed by the poll. Fortunately, the hospital was able to publish a detailed report on the poll in local newspapers, which among other things, helped to clear up misunderstandings.

Public ignorance, it should be emphasized, did not stem from public indifference. On the contrary, we found a high degree of interest in and sympathy toward the hospital. Approximately 3000 questionnaires (see p. 50) were mailed to families out of a total population of 29,000 in the hospital's service area. Almost 28 per cent replied—a considerably higher percentage than the average for polls of this type. Moreover, of those who replied, nearly one in every two not only answered all the questions but also took extra time to add individual comments and suggestions of their own. (See Table, p. 50.)

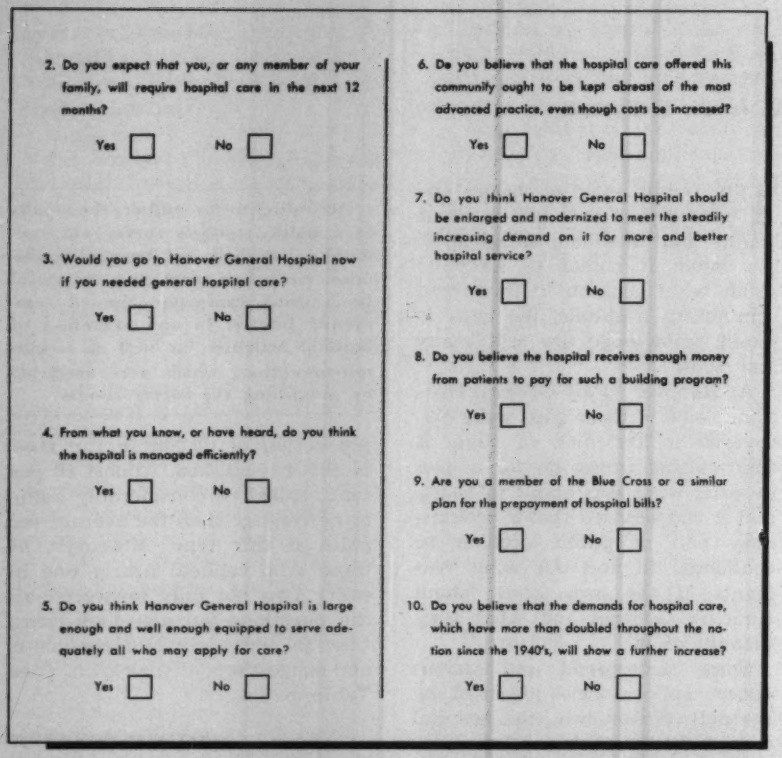
Robert T. Patierno is the administrator, Hanover General Hospital, Hanover, Pa.

WHAT WAS COMMENTED

We learned from these comments that the people the hospital serves were deeply concerned about the quality of hospital care. Equally important, they knew their subject. Among suggestions that recurred most frequently were comments concerning the need for more hospital personnel and more specialists—especially in the field of orthopedics. Other comments concerned the pediatric section; some of these were constructive and valuable.

What was really surprising was the extensive knowledge displayed on subjects about which it is often assumed that the average layman knows little or nothing. There were, for example, several suggestions that a recovery room be established. Even progressive patient care—a fairly sophisticated suggestion to come from residents of a community the size of Hanover—was recommended. Opinion was almost unanimous on two points: first, that Hanover General was not large enough and second, that it should be enlarged and modernized.

Finally, we were pleasantly surprised to find out how sympathetic and understanding people were on the subject of hospital



2. Do you expect that you, or any member of your family, will require hospital care in the next 12 months?

Yes ☐ No ☐

3. Would you go to Hanover General Hospital now if you needed general hospital care?

Yes ☐ No ☐

4. From what you know, or have heard, do you think the hospital is managed efficiently?

Yes ☐ No ☐

5. Do you think Hanover General Hospital is large enough and well enough equipped to serve adequately all who may apply for care?

Yes ☐ No ☐

6. Do you believe that the hospital care offered this community ought to be kept abreast of the most advanced practice, even though costs be increased?

Yes ☐ No ☐

7. Do you think Hanover General Hospital should be enlarged and modernized to meet the steadily increasing demand on it for more and better hospital service?

Yes ☐ No ☐

8. Do you believe the hospital receives enough money from patients to pay for such a building program?

Yes ☐ No ☐

9. Are you a member of the Blue Cross or a similar plan for the prepayment of hospital bills?

Yes ☐ No ☐

10. Do you believe that the demands for hospital care, which have more than doubled throughout the nation since the 1940's, will show a further increase?

Yes ☐ No ☐

THIS is a sample page from the questionnaire sent to families served by Hanover General Hospital in a preliminary public opinion poll before beginning a fund-raising campaign.

costs. No less than 81 per cent of those replying to the poll believed charges to patients were "fair", and another 4 per cent said they thought charges were "low".

PUBLIC MISCONCEPTIONS

Some fundamental and important misconceptions about hospital operations were disclosed in the survey. For example, 40 per cent of the people asked replied "yes" to the question: "Do you believe the hospital receives enough money from patients to pay for a building program?" Admittedly, it was a minority opinion—but the minority was, we thought, uncomfortably large.

An even larger minority showed a complete misunderstanding of the nature of the hospital's board of directors. Some 48 per cent said they thought the board members received some sort of compensation for their services—either in the form of salaries or discounts on their own bills.

On the subject of ward patients, the replies were most dismaying. Nearly two-thirds of those taking part in the poll thought physicians on the hospital staff were paid fees for their services in treating ward patients. Of these, 40 per cent thought physicians received reduced fees, and another 24 per cent believed physicians were paid regular fees.

These survey questions seemed to us so elementary that we had taken it for granted most people knew the right answers. Finding out that people didn't know the right answers meant the hospital hadn't told them enough about itself.

But when our fund-raising counsel showed us the findings of similar polls conducted in hundreds of other communities, we found that we were far from alone. In fact, the three particular misconceptions discovered by the Hanover General survey proved to be the three most common.

That the public generally should be so mistaken about such basic and important matters regarding hospitals leads to only one conclusion—a failure on the part of hospitals to fully educate the population they serve.

Hanover General Hospital was fortunate to be able to correct the mistaken views the public entertained by publicizing the poll results—with particular emphasis on the misconceptions.

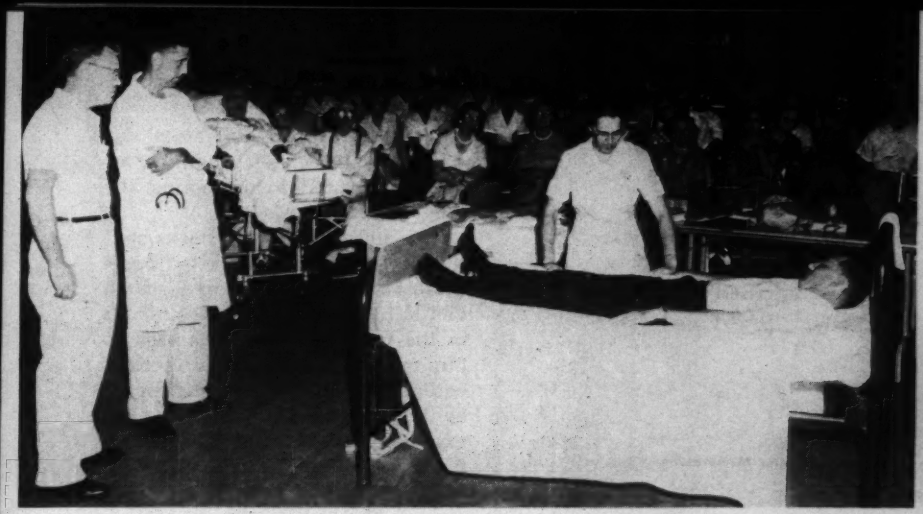
Although it is difficult to estimate whether mistaken views like the ones we encountered would have a decisive effect on the course of a fund-raising campaign, clearing them up certainly is a decisive asset. For all three misconceptions concern money. During a campaign, money is an all-important and often sensitive subject—particularly if people believe that a hospital already has lots of it to spare or is, in any way, misusing it.

At any rate, the Hanover fund campaign had a happy ending—A $1 million goal was oversubscribed by nearly $100,000. ■

Analysis of 336 comments on replies to public opinion questionnaire sent to 300 families*

Classification	*No.*	*Per Cent (approx.)*
I—Excellent	89	28
II—Good, but with some criticism	169	50
III—Critical, but constructive	54	15
IV—Antagonistic	17	5
V—No knowledge of hospital	7	2
Total	336	

**This analysis does not include any specific comments of the 89 which are classified as "excellent". It does not incorporate the responses to questions checked, and is only the opinions expressed by 336 respondents—out of 733—who took time to write comments.*



(ABOVE) The Newton County stroke clinic is designed to help rehabilitate stroke victims by training patients and their families in the proper use of massage and exercise and by providing emotional support to encourage patients to help themselves. (RIGHT) Ambulance services in Covington, Ga., offered their services free of charge for bringing stroke victims to the first Newton County stroke clinic, and they have continued to help for the past 16 months.

GEORGIA STROKE CLINIC HELPS PATIENTS HELP THEMSELVES

by MRS. W. V. DICKINSON and MRS. MARY MALLARD

A FREE twice-monthly clinic for the rehabilitation of stroke victims is now a permanent fixture in the health care resources available to residents of Newton County, Georgia. The clinic, now well into its second year, was founded in recognition of the need for home training in management and rehabilitation of stroke patients in an area where major rehabilitation centers and facilities are unavailable to rural patients unable to afford the expense or to endure the discomfort of travel to these centers.

Sponsored by the Newton County Heart Council, the project was organized as a major civic project in the community of Covington, population 5000. First housed in the gymnasium of the old Covington elementary school and later moved to the courtroom in the new city hall building, the clinic draws patients from throughout Newton County.

Newton County Hospital, Covington's 54-bed facility, was involved closely in the project from the start. For the initial step, the hospital administrator sent the superintendent of nurses and two staff nurses to Atlanta for a course in the technique of reactivating muscles rendered useless by a stroke. Upon their return, the superintendent of nurses, an instructor of an annual Red Cross nurses' aide class taught in the hospital, went through her file of 78 active Red Cross nurses' aides giving time to the hospital and chose 10 to be trained to work with the stroke victims in their homes and at the clinic.

Names of all known stroke victims in Newton County were obtained from local physicians, the county ministerial association, the public health office and the welfare department. The chairman of the nurses' aide division of the local Red Cross chapter and members of her staff visited every known stroke patient in the county, explaining to them and their families the purpose of the stroke clinic, and when and where the first clinic would be held. During these visits it was determined whether or not the patients needed any assistance in getting to the clinic.

The hospital administrator contacted the ambulance services in town, and they offered their services free of charge. At the first clinic, all four of the town's ambulances brought in patients. They have continued to help, although three of the patients who came into the first clinic on a stretcher are now coming in wheel chairs and walking in with assistance.

Through local heart councils and public health organizations, five surrounding counties were invited to bring in stroke patients, and 45 stroke victims and their families attended the first clinic. The number returning to each clinic has never been less than 26 stroke patients, plus families and workers.

The consulting physicians on the heart council helped set up the clinic by working out job descriptions and different types of services offered, and the hospital medical staff and the entire county staff pledged support. The clinic, lasting two to three hours, is conducted every other week, with all the physicians in the county giving moral support and recommending the clinic to their private stroke patients. Between clinics, the Red Cross nurses' aides make visits to the homes twice each week to offer help and encouragement to the patients. There have been no admission charges, no fees, no medi-

Mrs. W. V. Dickinson is the administrator of the Newton County Hospital, Covington, Ga., and Mrs. Mallard is associate editor of the *Covington News*.

GUIDE ISSUE ERRATA

Following is a list of errata in the Guide Issue of HOSPITALS, J.A.H.A., Aug. 1, 1961

LISTING SECTION, PART 2

NOW READS	SHOULD READ
U.S. Air Force Hospital, Castle Air Force Base, Merced, Calif. Lt. Colonel L. Umphress MSC, Exec. Off.	Lt. Colonel Charles S. Burke MSC, Exec. Off.
Approval	1
Park City Hospital, Bridgeport, Conn. Beds 69	64
St. Francis Hospital, Waterloo, Iowa. Sister M. Barbara R.N., Adm.	Sister M. Terasine, Adm.
William Newton Memorial Hospital, Winfield, Kans. Dorothy M. Bixler R.N., Adm. Beds 108	E. Dean Grout, Adm. 106
Eastern State Hospital, Lexington, Ky. Donald G. Shropshire, Adm.	Logan Gragg Jr., M.D., Supt.
Maple Grove Medical Care Facility, Grand Rapids, Mich.	Should be listed under Inpatient Care Institutions Other than Hospitals
Blanchard Valley Hospital, Findlay, Ohio. G. T. Stafford, Adm.	W. R. Brungard, Adm.
Crippled Children's Hospital and Medical Center, Corpus Christi, Texas.	Ada Wilson Hospital of Physical Medicine and Rehabilitation Center (formerly Crippled Children's Hospital and Medical Center)
Cochran County Hospital, Morton, Texas.	Memorial Hospital (formerly Cochran County Hospital)
Quincy Valley Hospital, Quincy, Wash. Larry Sievers, Adm.	Paul Kibby, Adm.
Kingston Military Hospital, Kingston, Ontario, Canada	Canadian Forces Hospital (formerly Kingston Military Hospital)
Crawford, Lt. A. Robert Jr., Asst. Dir.	Crawford, A. Robert Jr., Asst. Dir.
Crawford, Lt. Asa R., Assoc. Dir.	Crawford, Asa R., Assoc. Dir.

STATISTICS SECTION, PART 2

Table 2A (p. 397), line 2: Federal total (Total assets in thousands) 12,123.	2,123.
Table 2B (p. 399), line 25: Long-term general bed size 50-99 (personnel per 100 patients) 10.	110.
Table 5 (p. 426): 6408; 442, 6.6%; 215, 3.4%; 336, 5.2%; 251, 3.9%; 429, 6.7%; 123, 1.9%; 372, 5.8%.	6408; 5798, 90.5%; 4912, 76.7%; 3042, 47.5%; 1419, 22.1%; 6017, 93.9%; 1980, 30.9%; 2546, 39.7%.
Table 5 (p. 427) footnote	*Laundry, dietary and housekeeping are contracted out.

HOSPITALS OMITTED FROM PART 1

*Northwest Hospital
6201 W. Northern Ave.,
Glendale, Ariz.
Tel. YE 9-3371—
Donald F. Zuercher,
Adm. 23-10-S-65 beds.

*Commerce Hospital,
1708 Monroe St.,
Commerce, Texas.
Tel. 170—
Robert A. Patterson,
Adm. 33-10-S-27 beds,
7 bassinets.

*Greensville Memorial Hospital, U.S. Rts. 58W and 301, Emporia, Va.
William King Brown,
Adm. 23-10-S-41 beds,
10 bassinets.

cal treatment, or obligation for stroke victims, their families, or those interested in promoting the program.

Two unsolicited $25 checks sent to the clinic by an interested businessman and the sister of a stroke victim have been the total amount in the treasury. This was used to buy materials for physical therapy equipment which was constructed by the physicians and workers. For example, one such aid is a pulley made of window sash cord with toilet paper rollers used for hand grasps. The pulley is made stationary above the patient's head, and by placing both hands on the rollers attached to either end of the rope, he can pull his paralyzed hand and arm up and back with his good hand. Many other therapeutic aids used were constructed from materials at hand as substitutes for expensive unavailable equipment.

REHABILITATION STRESSED

The purpose of the clinic has been and is to assist in the rehabilitation of individuals who have suffered strokes by training the patients and their families in exercise techniques and providing emotional support to encourage the patients to help themselves.

After 16 months of successful operation, the results of this cooperative civic project are impressive and heart warming. Two of the physicians who work in the clinic have been invited to speak to interested groups in different counties over the state and have directly aided in setting up six stroke clinics in widely separated areas of Georgia. Although it is difficult to estimate the number of stroke victims and their families who have found a new hope as an outgrowth of this single project, 187 stroke victims have attended the clinic in Covington alone.

The sessions themselves are a cross between an old-time camp meeting and a busy workshop. At every meeting patients are not only willing but anxious to demonstrate the progress they have made in walking, talking and writing. The eagerness with which the stroke patients have received the clinic, the deep and humble thanks in their eyes and manner as they experience hope again is a modern miracle. ■

Must the patient pay for nursing education?

by WILLIAM K. TURNER

Increased responsibilities for patient care have necessitated changing nursing education from a process of training to instruction, and the resultant drop in student services has not yet been translated into revised fiscal practices, the author states. Because the apprenticeship concept in nursing education still governs fiscal policy, when there is clearly a need to parallel practices in other postsecondary education, the patient is financing nursing education to a disproportionate degree, he continues.

In an era when the cost to the hospital patient has been mounting rapidly because of wage inflation, technological advances and a host of other reasons, it is incongruous that the hospital-conducted nursing school should also add to this financial burden through the perpetuation of an anachronistic educational practice.

Fiscally speaking, this major segment of nursing education is still regarded in the preponderance of our hospital schools as an apprenticeship. Since the student is not paid for the service she renders, she is not required to pay for instruction or living expenses to any significant extent—although she does pay for books, uniforms and educational incidentals—in the large majority of our diploma schools. Such practice is today an anachronism, long since outmoded by vastly changed circumstances of curriculum content together with the greatly increased cost of instruction and student maintenance.

Why do we continue to give away nursing education to the students while passing the costs along to the patients? Where else can postsecondary school education be obtained for token tuitions and expenses?

The college and the prep school have faced up to the realities of today's spiraling education costs, so tuition and other charges have moved up accordingly. The college and the prep school are knowledgeable about these cost increases, of course, for education is their primary business and the source of their income. Their singleness of purpose, therefore, makes easy direct comparisons of cost and income, which have then to be equated if the schools are to continue to exist. With this obvious parallel example of what has to be done to finance today's education costs, why have hospital nursing schools failed to follow the pattern of general education in regard to fiscal practice?

It is readily admitted that the nursing education phase of hospital educational activities is unique, differing appreciably from the organization of general education programs. The simultaneous acquisition of theoretical knowledge and practical skills by an admixture of classroom and repetitive practice application does contribute to the furtherance of the primary purpose of the parent hospital organization. It is from this primary function that the hospital derives its income. However, the ability to relate nursing education income and outgo in hospitals is a more difficult proposition than in the case of other schools for two reasons:

INDIRECT COST PROBLEMS

1. Until very recently, the precept which almost universally applied to diploma school fiscal practice was that the student paid for her education through service to patients. In fact, this conviction was so ingrained into the thinking of nurse educators that the charge of "hospital exploitation" of the student died exceedingly hard. In fact, so universal was the acceptance of this idea that even though it has been refuted within hospitals, there are still those among the public who believe it.

2. The difficulty that has existed

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until the relatively recent development of sound cost analysis practices within hospitals differentiating between the cost of caring for patients and the total cost of educating students. Until authoritative methods were developed for determining costs of hospital services, how could one determine with any degree of certainty how much of commonly used services, such as dietary, laundry, power plant, etc., were properly allocable to hospital service or the school? Nursing school direct costs for salaries and supplies have always been known. There has never been a problem in determining accurately the payroll cost of instruction or expenditures for educational materials. However, indirect costs, particularly the cost of maintaining the student, are a very different proposition indeed.

NET COSTS ANALYSIS MADE

Even after indirect costs were determined by systematic cost analysis and total costs became generally known, there remained another area which defied objective evaluation until even more recently. This is the important matter of the net educational cost which remains after allowance is made for the value of student services to patients during the educational experience.

In 1953, we attempted at Newport (R.I.) Hospital to produce an authoritative analysis of net costs of nursing education, using a firm of certified public accountants to assure impartiality in conducting the study. Our first attempt was inconclusive, but from the lessons learned, acceptable studies resulted for the years 1954 through 1957. The last of these studies employed both recognized methods of evaluating student nursing service, and the results of the studies have been published.* Both the Connecticut Hospital Association (CHA) and the Illinois Hospital Association (IHA) have produced uniform studies for all of the schools in their respective states and have published the data.

Review of these various cost analysis studies showed that recorded direct education costs approximate only one-third of the total costs. Further study of results showed that approximately one-half of the total average cost constitutes student living expenses. Stated in another way, recorded school expenses average approximately 34 per cent, indirect education expenses approximately 16 per cent and student maintenance around 50 per cent. Until cost analysis techniques were applied to hospital costs, we had been accustomed to looking at only one-third of the cost of running hospital nursing schools.

On the other side of the coin, all of these studies cleared away the fiction that the student nurse pays for her education through her services to patients. In fiscal 1957, the Newport Hospital study showed that student services, valued by use of the replacement method, were worth approximately 48 per cent of the total cost. For the same year, the CHA study of 17 schools, employing the usability method, valued student services at an average of 45 per cent of the total cost. A year later the IHA study of 52 schools, utilizing the usability method, valued student services at a 31 per cent average of total costs.

THE USABILITY METHOD

On the matter of the method of preference for evaluating student services, the National League for Nursing (NLN) has not completed studies being made under a United States Public Health Service grant to test the usability method. Although the Newport study in 1957 employed the usability method, we could not at that time get clarification and produced two value rates of 52 per cent or 37 per cent, depending upon the alternative assumption selected. The higher of these rates, 52 per cent, uses a comparable statistical base to the replacement method study that developed the 48 per cent value of student services in relationship to total educational costs. In my opinion, the method used in making this evaluation is of less importance than doing the study, and I have consistently recommended both methods be used, as little extra effort is required either way, and there then can be little doubt about the conclusion reached.

Of great importance is the fact that all of these studies showed that only approximately 6 or 7 per cent of the average total cost of educating student nurses is met by tuition and other fees charged to the student.

In the final analysis, then, more than 40 per cent of the cost of educating the diploma school nurse is provided from patient income in the 1100 hospital schools that are training 80 per cent of the professional nurses for the needs of the entire country. This is a decidedly unfair distribution of costs and benefits.

TUITION MUST BE RAISED

There is but one way to ameliorate this disproportionate assessment of patients in diploma school hospitals, short of public underwriting of nursing education, and that is to require from the student herself payment for the education she receives. In the case of Newport Hospital in 1957, this would have meant additional student assessments of more than $900 per year. We were then charging an average of $112 per year, and the cost trend since then has gone up sharply. Illinois set this deficit at $1620 per student per year. The payment solution assumes that we prefer to use the cash income approach, instead of reversing the downtrend in hours of permitted service, to allow the student to again earn her education instead of paying cash. The shortage of nursing care in many hospitals, incidentally, cannot be rectified merely by adding cash to the till.

Permitted student service may be increased by relengthening her total weekly hours. This is in direct opposition to what has been urged by accrediting authorities over the years, as well as what has been happening in the business world in general, but what is another alternative short of requiring cash payment in full or disturbing the short work week?

ELIMINATE CURRICULUM 'EXTRAS'

Since the hospital patient is paying for such a high proportion of these educational costs, the curriculum in the hospital school should be hospital-oriented, to the exclusion of courses that prepare for service other than hospital

*Turner, Wm. K. Financing nursing education. HOSPITALS, J.A.H.A. 33:40 Oct. 1, 1959.

nursing. There is a move afoot in general education, however scattered, small and varied, to eliminate "frill" courses to permit more concentration on essential elements of the basic curriculum. Why cannot we, in the spirit of serving primary needs first, endeavor to get down to bedrock in the most effective utilization of the smaller number of student hours now available?

THE SCHOLARSHIP METHOD

On the national scene there are efforts of several years duration to obtain federal financial support for nursing education. There are constitutional prohibitions in 14 states which preclude the use of public funds for nonpublic schools, and further problems regarding sectarian schools and integration.

An alternative method of support to circumvent these problem areas is the scholarship approach, payable either to the student or the school. However, unless and until total student charges are brought into realistic alignment with the educational costs involved, legislators have extreme difficulty in understanding the need for blanket scholarship assistance. Another reaction on the part of legislators is a failure to understand why our hospitals for so long have been underwriting with patient income such a high proportion of nursing school costs.

Why is it that the majority of our hospitals have been reluctant to raise student charges to realistic levels? There is need for more hospitals still to undertake studies of nursing costs, both gross and net. To me, this is not the important reason, and whatever its real significance, it is diminishing quite rapidly. The real reason, I believe, is a rationalization on the part of many hospitals that their respective situations are unique and that to follow the lead of "specially situated" hospitals that have pioneered in raising charges to obtain full cost recovery would result in disastrous consequences as far as enrollment is concerned. In all of the inquiries I have made in New England, Illinois, Iowa and of the NLN, I have yet to find this feared consequence has materialized. The rationalization, arguing for maintenance of the status quo, goes further: "My community is too depressed economically to do this at this time."

This probably does not mean in the majority of instances that young people from these communities are not attending college, but rather recognition of the fact that nursing students in the past, at least, have been drawn from families not able to meet college entrance fees. If this is true, and it has been said that economic recession would improve enrollment in nursing schools, I have yet to find that the lower cost schools have had a competitive advantage over those who charge higher fees. I have yet to see figures or learn of situations where higher tuitions seriously affected the enrollment of a worthwhile educational program. However, I also believe that the raising of nursing school fees should be accompanied by appeals to civic organizations for nursing scholarships and loan funds to insure against nonacceptance of otherwise qualified applicants and to guard against decreased desirability of nursing schools in comparison with other types of schools that can make such funds available to their students.

An idea of what has been happening in the New England area can be gained by comparing the results of a recent questionnaire with those obtained from a questionnaire sent almost three years ago.

Response to the questionnaire was excellent in both instances—more than 80 per cent. In 1959, 45 per cent of the schools were charging less than $400 for three years, compared to 16 per cent in 1960. In New England, 86 per cent of our schools were charging in total less than $600, but this rate has now diminished to 57 per cent. This means that currently 43 per cent of the schools are charging in excess of $600, whereas in 1959 the comparative figure was 14 per cent. There is no mistaking this trend.

Total charge for three years now ranges from $133 to $1785. It is not surprising, that with this disparity within a given economic area, legislators and the public at large should have difficulty understanding the need for supplementary public financing of nursing education. Incidentally this spread in the pricing of hospital service is by no means limited to this example in education charges, and nonstandard pricing is what has led to the almost universal cost basis of settlement by third-party purchasers of hospital service. In 1959 the range was not very different, $110 to $1416. Note that the top figure increased much more than the minimum figure. However, comparison of these ranges is not the heart of this matter at all. Greater significance is attributable to the step up in average total charges—only 11 hospital schools in New England are now below a $400 total, whereas in 1959 there were 32.

CORRELATION NOTED

There appears to be a correlation, too, between cost study activity and increased charges. Vermont, Connecticut, New Hampshire and Maine have established higher average charges than Massachusetts and Rhode Island. Both limits of the cited charge range occur within the state of Massachusetts, the high being in Boston and the low being in the southeastern part of the state. It is probably significant, too, that area practice is an important determinant to the practice followed by an individual school. The Boston high may have had an influence on other Boston practice, as the metropolitan area is the high average for the state, comparing favorably with the Connecticut average, whereas the southeastern sector constitutes the low average. It would appear, too, from perusal of these figures, that Rhode Island and southeastern Massachusetts were tending to influence one another to hold charges close to those in effect for many years.

These conclusions are my judgment and are in no sense to be interpreted as the result of either a scientific or comprehensive review of data available.

OTHER OBSERVATIONS MADE

Other observations are that "tuition" charges strictly for instruction are now the rule rather than the exception, and this is the charge which is showing the greatest and most frequent increase.

(Continued on page 104)

professional practice

The changing role of the professional nurse in the hospital

by EDMUND D. PELLEGRINO, M.D.

The nurse will return to the patient's bedside as she wants to, the author states, but as a clinical specialist not as a 19th century lady with a lamp. Changes in medical practice and hospital care are ineluctably changing the nurse's role, he asserts, but the result for the nurse will be a more significant and equally satisfying part in the personal, professional care of the patient.

ALTHOUGH professional nursing is only 100 years old, the function of nursing has existed since the first human became ill or disabled. It arose out of the interested ministrations of his family members or friends who provided certain services still identified as nursing help in the care of bodily needs, sympathetic companionship against the uncertainties of illness, observation of the patient and carrying out of a therapeutic plan, however intricately or primitively conceived. This comfortable and traditional picture is easily understood by the patient, his family, the physician, the administrator and, until recently, by the nurse herself.

A VALID DEFINITION

It is this conception and the image it connotes of the satisfaction of the intimate needs of the sick which comes into all our minds under the term "bedside nursing". I would submit that this is, and will always be, a valid definition of the function of nursing, but that it can no longer be the full content of the profession of nursing. Because of profound changes in science, the organization of society and medical care, the evolution of the hospital and the changing relations between the nurse and the other health professionals—this comfortable view is no longer sufficient.

The impact of these forces on the whole range of nursing has already been so great that, paradoxically, with the achievement of status as a profession, nursing has begun seriously to question its own identity. This same paradox confronts all the health professions and can be summed up in our failure as yet to reconcile the good things implicit in the traditional concept of nursing with the changes demanded by a rapidly expanding universe of knowledge and specialization. Can optimum medical and nursing care be redefined in terms of the new science and the new society so that the vast potential of modern life can be applied to the sick, here and now?

AN OBVIOUS ERROR

We should at the outset recognize and avoid an obvious error. Medicine and nursing cannot undertake this redefinition alone. Theirs is a mandate arising in individual and societal needs and to an increasing degree, the patient now influences the precise content of nursing care. We shall have to be sensitive to the dissatisfactions with the conduct of our professional business voiced so frequently in the world around us. We shall find little sympathy, and only empty refuge, if we divert our energies to a niggardly defense of our professional boundaries. What is wanted is a considerate ordering of the best means of meeting the needs of society for those functions recognized as nursing.

A NEXUS OF CHANGES

The nurse today is caught in a nexus of changes which have carried her progressively away from the intimate care of the patient, but which at the same time promise to return her to the bedside in a new and expanded role more consonant with the demands of contemporary science and society. A short digression into recent history should help to locate our present position in this cycle of return.

A major modification of the age-old view of nursing came a century ago when for the first time women were trained specifically and on a professional basis to perform the services needed by the sick. The initial orientation was to provide the traditional service, but with better trained people. Gradually, however, rapid changes in the complexity of medical practice, the usage of hospitals and the patterns of social organization, imposed upon her a set of administrative activities which left little time for ministering to the immediate needs of individual patients. The activity analyses of the 1930's

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This paper was presented at the 63rd annual meeting of the American Hospital Association.

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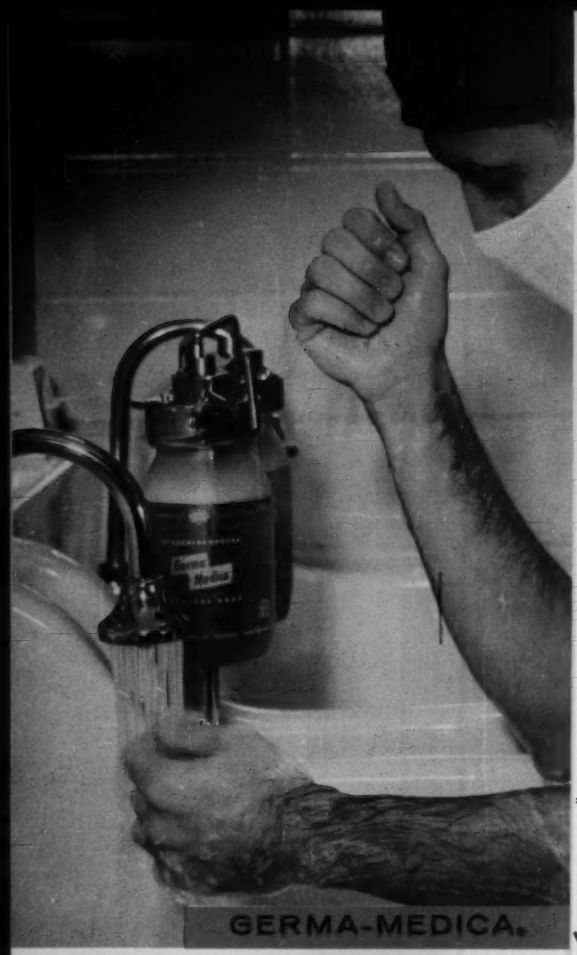

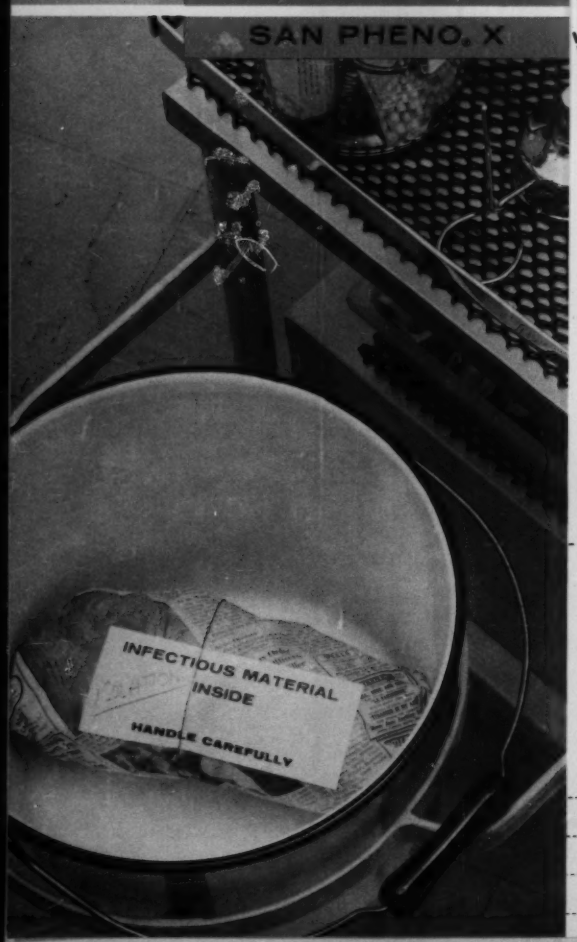

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documented this concern with management of the patient's environment rather than the patient. In the years following World War II, the functional method of nursing was introduced. The care of a given patient was divided to fit the varying abilities of an increasing variety of nursing personnel. The practical nurse, the aide, the ward clerk and the volunteer assumed more responsibility at the bedside.

THE PRESENT DILEMMA

Yet the nurse became busier than ever with desk work, procedures and medications. By the end of the last decade, it became apparent that despite the delegation of certain duties and the enlistment of other hospital departments to free the nurse's time, she was still moving away from the patient —the center of gravity of her interests. Distressingly, as several studies have shown, even when the time was made available, the nurse did not return to the bedside and often no longer knew how to do so. The present dilemma appears to arise from her attempt to recapture the satisfactions of doing things directly for the sick; in a word, to recapture control of the functions of nursing. But is this really the substance of the profession of nursing, or has that substance now changed in such a way that to reverse the last 100 years of history is no longer possible or desirable?

There are two logical problems in the present state of this question. First, the very admission of the need of a nursing team transfers the nurse's attention from the manipulation of papers and techniques to the manipulation of people. The team must be led. Only the professional nurse can lead it and weld it into an instrument for the benefit of the patient.

Secondly, by insisting that certain activities, such as charting, medications and treatments, can only be done by the professional nurse, there arises a misconception that these activities are the very substance of professional nursing. This is a serious error—a profession never consists of a set of techniques, but in an intellectual discipline: an understanding of the principles of action upon which the profession is founded, together with a knowledge of the limitations of its techniques and the need to modify them when the situation is no longer standard. Specifically, in nursing this means understanding the reasons for the actions involved in the functions of nursing.

Thus the professional part of nursing can never be defined as a quantum of activities as some in their anxiety have tried to do. Nursing is a role interpreted and individualized by a total understanding of a patient's problem.

It is the nurse who interprets the role of nursing in each case and molds it to suit the specifics of her patient's needs. Clinical nursing then, on the professional level, is not something done to or for the patient, but the perception of what needs to be done and how. Equally important is seeing that it is done efficiently and expeditiously. There are times when its functions can be done by others and times when only the professional nurse can do them. But only the professional can make this decision, since it must be based on a knowledge of the clinical state of the patient.

CLEAR ALTERNATIVES

This knowledge is obtainable only at the side of the patient with the nurse in frequent intimate contact with his needs and his changing clinical situation. It is plain that we are at a most critical point. The demands of modern nursing as a profession are such that there must indeed be a return to the bedside, but not in the age-old way with a professional nurse doing all things for all patients. Others have already demonstrated that they can perform the techniques of nursing satisfactorily. The professional nurse therefore has two clear alternatives: (1) she can concentrate on the administration of the means of nursing and move further away from the patient, or hopefully, (2) she will direct her unique potential to the comprehension of the nature of the problem of the patient. She may need to delegate even more of the functions of nursing, but cultivate the profession of nursing.

With this distinction between profession and function in mind, let us briefly examine some of the familiar forces in the contemporary scene and see specifically how they will alter the nature of nursing as a profession in the hospital.

Unquestionably the most powerful force affecting both medicine and nursing is the increase in our technological and scientific knowledge. The physician's actions have become deeply rooted in the physical and biological sciences. There is every expectation that our continued advances will come from this direction and that new sciences as yet unborn will contribute to the further understanding of disease.

A GROWING EMPHASIS

The organization of society is becoming more complex and all phases of life are more specialized and interdependent. Each profession is required to examine its greater social responsibilities. The emergence of the democratic political ideal, economic progress and mass education will increase public participation in health organization and accentuate the social responsibilities of medicine and nursing.

Perhaps as a response to the growing requirements of the socialization of life, there is a growing emphasis on the internal responses of the individual. Psychiatry the existential philosophies and psychosomatic medicine have all assumed importance in attempting to meet the special stresses of a highly organized society in which the individual seeks to bring the conflicting demands of his personal and societal needs into balance. One of the special charges of nursing will be to understand and speak for the individual in the face of the progressively intricate web of relationships common in the modern hospital.

The adaptation to these external scientific, social and psychologic forces in modern life has produced certain internal changes in the way patient care is provided within the hospital. The comprehensive-care and progressive-patient-care concepts are too well known to be described in detail here. They are both aimed at better meeting the needs of patients in the scientific and highly organized society

of the modern hospital. Their implications for the role of the professional nurse are essential in any consideration of what future directions should be taken in practice and education.

A TOTAL VIEW

These programs emphasize a total view of the patient's problems; they function via the team approach and stress continuity of care and coordination of all services contributing to the care of the patient. They require of the nurse a broader knowledge of all the fields related to medicine. She must interpret for the patient and coordinate a much more complicated therapeutic plan than ever before. The definition of the nursing problem has become much more critical than before. The number of people to be supervised will not lessen nor will the demand for supervision of those things which are done at the bedside.

The nurse can best function in these complex plans if she makes herself a clinical specialist capable of acting in closer liaison and emotional problems. The plethora of instruments and procedures will continue to multiply. The nurse cannot be expected to master the details of all of these, but she must be able to comprehend the principles underlying their clinical application.

THE MAJOR CONCENTRATION

In all of this, it is obvious that the major concentration will be on integration, understanding, supervision and coordination of clinical and not administrative activities. The place of the nurse in such schemes is not dependent on the performance of any set of procedures, important as they may be. Her role is crucial, along with the physician's, in transforming a multidisciplinary mélange into an understandable therapeutic plan for the patient. She will be able to function better in this capacity if she is willing to yield some of the remnants of activities which she still thinks only the nurse is trained to carry out—such as administering medications, charting and handling detailed management of the patient care unit. Her position will be more like that of the physician, who does not insist on performing all procedures himself, but does not, because of this, lose his contact with, and control of, the clinical situation.

I do not wish here to enter into the controversy on who shall administer the patient care unit. Nursing is most competent to answer specific questions of operation which can bring its practice into consonance with the requirements of scientific medicine. I do think that if nursing will concentrate on what is its essential professional role, a method will be achieved which can assign much ward housekeeping to others and leave the management of the clinical situation under nurse direction.

The gradual change in our conception of the functions of the community hospital will materially alter the climate in which nursing operations are performed. Only in the last half century has the hospital become accepted as a place in which to get well. It is being transformed into a community health center. Here all the health resources of a community —the curative, the rehabilitative and the preventive—will be concentrated and coordinated. The spectrum of services is being progressively widened to include all varieties of illness and specialized medical institutions will decrease in number. Public health, social, welfare and voluntary health agencies are seeking a hospital base so that inpatient and outpatient care can be made more continuous.

Even if none of the changes we have prefigured up to this point ever materialize, there is another fact of reality which is a serious obstacle to the return of the nurse to the bedside in the old-fashioned conception of this term. There will simply not be an adequate supply of trained persons to meet the increased demands of an expanded population, wanting more and different kinds of nursing service. All the health professions must deal with this problem.

ONE REASONABLE ANSWER

There appears to be only one reasonable answer and each branch of medicine must consider it carefully. We are all called upon to make a searching appraisal of those things which constitute the professional aspects of each of our fields—those things which require understanding of principles and the judgment necessary to modify actions. These cannot be delegated.

But there are many functions in the work of the physician, nurse and other health professionals which can be performed by others educated to a lesser degree, provided they are performed under supervision and within an organizational framework in which the professional can exert final responsibility. Only in this way can one highly trained professional, through the mediation of a large number of aides technically trained and supervised, make his special services available to more people.

Is there a real threat in any of these present and future trends to the potential contribution of the professional nurse or, more importantly, to the quality of patient care? Let us remember that the patient is more concerned with what the nurse is to him than what she does in the way of procedure. Certainly, if we make the distinction I have stressed, these changes should disclose enormous new possibilities for an even greater contribution to medicine and society. The nurse will certainly participate in bedside care in the future, but as a clinical nursing specialist who will (1) make rounds to ascertain the nursing needs of her patients; (2) supervise the performance of techniques; (3) make those clinical observations important to the physician; (4) interpret for the patient, and (5) supply the thread of continuity through a maze of procedures, tests and personnel which will proliferate endlessly.

The detailed administration of the patient care units needs better study to see whether it can be made to serve the needs of nursing practice rather than become the determinant of that practice. There is every likelihood that automation will provide speed, accuracy and labor-saving devices in many of the detailed functions of the modern hospital. It can, at least in part, relieve the nurse of making many of the continuous and critical physiologic observations so important in the care of the critically ill. There is prom-

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ise, too, that it may be useful in that cul-de-sac of nursing time, the preparation and keeping of clinical records on the patient care unit. This is another reason for not identifying nursing with any particular procedure!

NOT A REVOLUTIONARY IDEA

Do such new roles as our changing sciences may require imply that less personal, more mechanized, assembly-line version of nursing so roundly criticized in our communication media? Certainly not! The legitimate dissatisfactions will not be reduced by a return to an older romanticized and somewhat inaccurate picture of nursing function. Actually, the nursing roles we have described would violate their own ends if they became regimented. They are impossible to fulfill without close contact with the patient. There is no *system* of nursing which dictates disinterest in the patient. In the first instance, if the patient complains of nursing or medical care, it is not because it is modern, scientific, or organized. It is rather because of a professional, personal, or institutional failure to keep the patient as the focal point of all concerned—not a very revolutionary idea!

Freed of most techniques and procedures, the nurse can have no excuse for not seeing all of her patients frequently and conferring with physician, family and paramedical personnel. She will indeed return to the bedside, but the illusion that this will be in the 19th century manner is a misunderstanding of the current trends in medicine and society. The old role can now be expanded and fulfilled.

This presumption can be carried a little further. Educational requirements in nursing must be adjusted for these expanded roles in clinical nursing if any lasting changes are to come about. Perhaps the greatest need will be for a better general education prior to entry into nursing education per se. There is also the need for a much better grounding in the sciences basic to medicine and in quantitative thinking.

If the emphasis is to be on understanding and interpreting and working more closely with the physician, then the nurse must be able to speak the language of the sciences. Graduate nursing education will be required to concentrate on clinical subjects and the clinical sciences rather than on educational techniques. As much stress should be placed on the physical sciences as is now put on the emotional and social. An internship year in clinical nursing would impart the practical experience requisite for the performance of some of the roles previously outlined.

There are real deterrents to the achievement of all these goals. Physicians, nurses, administrators and patients will not part willingly with the comfortable conception of the nurse which has been intact for so many centuries. The nurse most of all will be anxious for she feels urgently the pull of her new responsibilities against the satisfactions and utilities of doing all things for her patients.

These conflicts inevitably will be resolved, since the fabric of medicine is being continually and rapidly rewoven. Nursing and medicine, then, will learn to preserve the good things of the past and at the same time modify them to the new demands of the future. Only in this way can the full potentialities of medicine be realized. Only then can physicians and nurses achieve both knowledge and understanding. ■

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NOTES AND COMMENT

Nurse-administered I.V. treatments

Reinterpretation of New York law prohibiting nurses from giving intravenous injections, transfusions, infusions and other "I.V." treatments now allows the nurses to carry out these procedures in time of disaster—natural or otherwise.

The Medical Society of New York announced a three-point program involving physicians' responsibilities, nursing education programs and public understanding of the new ruling. This program (1) requires all physicians to make certain that the nurses caring for patients in hospitals, physicians' offices and homes for the aged are thoroughly familiar with the latest intravenous techniques and medications; (2) asks hospital, nursing home administrators and boards of nursing schools throughout the state to cooperate in establishing or revising special courses both for graduate nurses in service and for student nurses, after reevaluation of the curriculum on the basis that the nurses will now actually perform the procedures, and (3) suggests that the public be adequately informed by the press, physicians and hospitals so that patients will understand the change. However, the Society warned that these procedures must be done under the supervision and guidance of a physician who still has the responsibility for the care of the patient.

The ruling states that wherever an injection can be made into a vein with the needle and without need of incision or "cut down", which a physician must do in serious cases where the veins collapse, a registered professional nurse can carry out the treatment prescribed by a licensed physician. ■

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2. Easy to use
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4. Low cost

Here's how each of these affect your operations:

EFFECTIVENESS

The Contact Plate Test and The Filtered Cell Test both show effectiveness against *Staphylococcus aureus*. In-use tests of soiled linens substantiate the findings. The filtered cell test also demonstrates ENSTAPH washed fabric is effective against *beta* hemolytic streptococci and salmonellae (including *Salmonella typhosa*). The anti-bacterial system in ENSTAPH is also capable of controlling bacteria such as *Escherichia coli*, *Pseudomonas*, *Aerobacter aerogenes* and *Alcaligenes*.

SIMPLICITY

ENSTAPH laundry compounds are completely built, ready to use in the wash wheel. No special additives or procedures are required. They provide superior soil removal and do not interfere with normal bleaching or souring operations.

RESIDUAL ACTION

The anti-bacterial system in ENSTAPH is substantive to fabric. It is activated when the linens are moistened, thereby giving true "in-use" protection against bacterial growth. The system remains effective after autoclaving and after prolonged periods of storage.

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The protective features of ENSTAPH cost approximately 2¢ to 3¢ more per hundred pounds of dry fabric—or about 3/10¢ to 3/10¢ per bed. With the protection provided at this cost, can the hospital afford not to use ENSTAPH?

* * *

Your nearby Swift Soap Specialist will be pleased to discuss your requirements with you. He will show you a simple, fast way for your laboratory to measure the effectiveness of ENSTAPH-washed fabric. Also, ask him for the results of an in-use diaper study conducted recently at five Chicago area hospitals. If you prefer, write for details.

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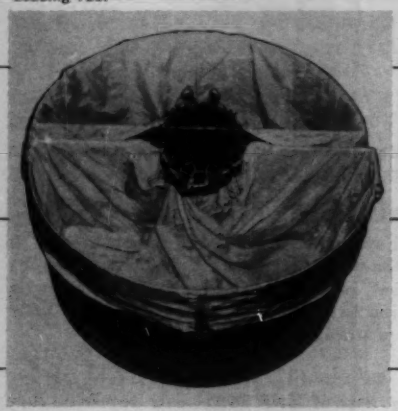
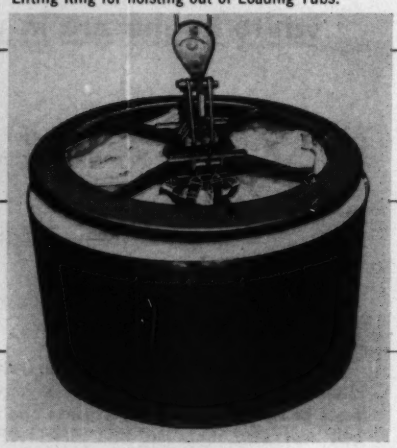
HERCULES CONCENTRATE KB Liquid Detergent with powerful germicide for general cleaning

1. One Half-Sling is placed in each semi-circular Loading Tub.



2. Loading Tubs containing Slings are placed in front of washer for fast, convenient loading.

3. When loaded, semi-circular Tubs are placed back to back. Loaded Half-Slings are then attached to Lifting Ring for hoisting out of Loading Tubs.



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The swing is to Slings - Half-Slings that is!

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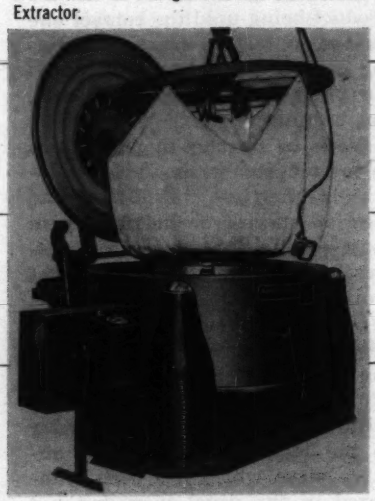
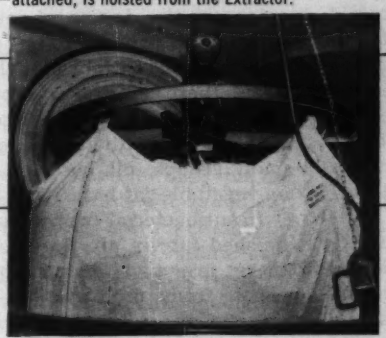
Half-Slings divide the load right from the washer. Designed to fit the NOTRUX'S semi-circular Loading Tubs, each Half-Sling is filled with half of the extractor

4. Half-Slings, attached to the Sling Lifting Ring, are lowered as a single unit into the NOTRUX Extractor.

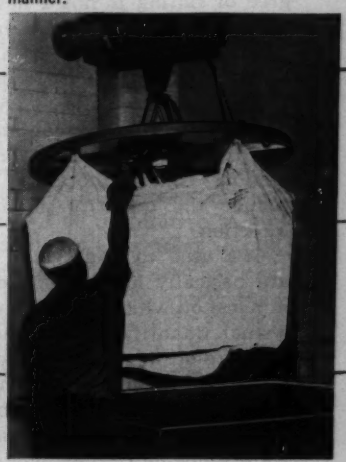


5. After Half-Slings are lowered into Extractor basket, the Sling Lifting Ring is detached from the electric hoist and is secured to the locking post on the cone at the center of the Extractor basket. Lifting Ring stays in the Extractor with the Slings during extraction.

6. After extraction, the Lifting Ring, with Slings attached, is hoisted from the Extractor.



7. Lifting Ring in position for dumping each Half-Sling individually. Operator pulls lever which releases bottom tails of one Half-Sling. Weight of work opens bottom of Half-Sling and work falls free without pulling or tugging. Other Half-Sling is dumped in the same manner.



load. The two Half-Slings are hoisted as a single unit into and out of the extractor. Each Half-Sling is dumped independently because one half of the extractor load is the same capacity as most hampers and most drying or conditioning tumblers.

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INFECTION-CONTROL MEASURES IN THE HOSPITAL LAUNDRY

by HEYWOOD M. WILEY

Among the methods used to reduce the cross-infection potential of hospital linens and blankets, according to the author, are oiling and use of germicidal and bacteriostatic additives in wash formulas. He describes these methods and discusses their proper applications in the hospital laundry.

OILING textile fabrics for the purpose of making them soft and laying the fibers to reduce the degree of linting is not a new idea; hospital laundries have been doing this for many years. With attention being so much focused on "staph" infection, there are opinions that air-borne, contaminated lint is a major cause of cross-infection. Oiling, therefore, should reduce the quantity of lint and infection.

Oils used to impregnate fabrics are basically highly refined white mineral oil which is combined with a small quantity of other chemicals to make oil miscible with water to form a true emulsion when mixed with water. Because it is an emulsion, fabrics so treated are not water-repellent; they will absorb other moisture, and moisture is necessary to activate any bacteriostat that may be added.

A less practical and more expensive way of oiling fabrics is to spray the compound on the fabrics. This method is more expensive, gives incomplete coverage and, if a bacteriostat is included, may cause some toxic conditions if inhaled by personnel and patients.

ADVANTAGES OF OILED FABRIC

In addition to acting as a lubricant, oiled fabrics may have more resistance to staining. Static electricity is eliminated. This is an important safety factor for linens that are used in operating rooms or where oxygen is being administered. Because it has no nutrient value, the oil has no effect on the metabolism of bacteria. Because of the adhesiveness of fabrics, oil treatment, or using an oil that contains a bacteriostat, or adding a bacteriostat, it is also claimed that more of these will be retained by the fabric and cause an increase in the degree of inhibition of bacterial growth.

If softness of fabric is the only need, there are several products from which to choose. These products can be divided into three main groups, oil base, or animal or vegetable fat base.

If antibacterial properties in the finished fabrics are the need, then there are two main groups to choose from: products that employ an aqueous solution of an antibacterial compound for use in the final rinse, or products with the antibacterial agent incorporated in the soap.

If one wants to incorporate both softness and antibacterial properties, then there are several products to choose from: mineral oil base with antibacterial compound added, animal base with an antibacterial compound added, or a vegetable base with an antibacterial compound added.

WHICH ADDITIVE TO USE?

Hospital administrators and laundry managers have been besieged with claims and counterclaims for many products. Much of the confusion surrounding the effectiveness of a product is caused by the lack of adequate knowledge and an effective means for testing the bacteriostatic properties of fabrics which have been treated.

The big questions are: Is the product being used the correct one for the job? Does the product being used help to reduce the number of cases of cross-infection in the hospital?

Little or no checking of linens to see whether or not a bacteriostat is effective may be due to lack of interest or the feeling in most hospital laboratories at present that they have more important work to handle.

One laboratory suggests the following simple procedure for testing treated fabrics: Obtain a piece of material which has been treated with a bacteriostat in the laundry in the usual way. Then take another piece which has been laundered in the usual way, but not treated. Cut from each of these pieces a circular swatch, the size of a standard petri dish. Put each piece into a petri dish and add 25 cc. of a 1:200 dilution of a 24-hour broth culture of *Staphylococcus aureus*. Allow these to dry at room temperature for one to two hours. Then add to each petri dish approximately 30 to 40 ml. of melted tellurite glycine agar. Allow to harden and incubate for 28 hours at 37° C.

METHODS OF APPLYING OILS

Properly applied to the fabric, combinations of oils and germicides help reduce cross-contamination problems in hospitals by minimizing the germ-laden lint and dust content in the air. A manufacturer of a fabric oil and an oil containing a bacteriostat recommends a dosage of four ounces of oil to 100 pounds of linens, and eight ounces for each 100 pounds of either blankets or

Heywood M. Wiley is foreman of the laundry at Girard College, Philadelphia.

This paper is based on a presentation at the AHA Institute on Hospital Laundry Management and Operation, Baltimore, Oct. 3, 1961.

diapers. The oil is mixed with water in a bucket before adding it to the washwheel.

The difference in the quantities is recommended because a blanket is used much longer between washings than a sheet, and it is necessary to counteract the large amount of urine in diapers. The oil emulsion is added immediately after adding the sour. This means a low water level and normal running time.

This manufacturer also claims that after fabrics have been treated with an oil, the next washing will be more effective because the accumulated soil will have combined with the oil and will not have penetrated the fabric and become fastened to the fibers. In addition, the oil added will not only lubricate but also keep penetrating, while fatty bases simply form a coating. If the proper amount of oil is used, it will replace water, so extraction time may be reduced and the linen will never have set wrinkles.

RINSING AND GERMICIDES

Now what about germicides or bacteriostats and their use and application in the laundry? There are a few words in laundry vocabulary that are used rather loosely and without a correct knowledge of their real meanings. Before going into this subject any deeper, let us examine the correct nomenclature and definitions.

Sterilizer—"must kill all bacteria when used as directed."

Bacteriostat—"must prevent the growth of bacteria."

Germicide or disinfectant—"must kill all bacteria except resistant spore-forming species."

Antiseptic—"either germicide or bacteriostat. Intended for application to living tissues or surfaces, such as skin."

Sanitizer—"must control, that is reduce, bacterial counts to safe levels as may be judged by public health requirements."

It is important to understand that the kind of bacteria, such as those which cause disease (pathogens), is often more important than the number.

There are many products available for laundry use that will make fabrics bacteriostatic (prevent growth of bacteria). Many of them work; a few don't. The laundry manager should purchase only from a reliable manufacturer. If the material he purchases has the approval of the U.S. Department of Agriculture, and it is used according to instructions of the manufacturer, the laundry should get the prescribed results. Most cases of failures are due to faulty application, or to omission of the material.

There is a bacteriostatic material available which is incorporated with the soap for washing. This particular material is insoluble in water and substantive to fabric. Reports of investigations indicate that the maximum level of the bacteriostatic is reached during the fifth washing and there is no further buildup. The main idea behind use of this material is that if the fabrics must be washed, then one must be sure to get the antibacterial agent into the fabric. It is also claimed that a concentration of between one and five parts per million of the active material is sufficient in the fabric to prevent the growth of staphylococci.

Nearly all bacteriostats being offered are basically quaternary ammonium compounds. There are some which have a high phenol coefficient to produce a quick kill. These products are made mostly with a mercury and bromide base and can be dangerous to the skin if allowed to remain on it too long. The manufacturers call attention to this possibility in their literature and instructions.

THE PROBLEM

What the laundry manager is interested in is a means of destroying or controlling microorganisms which can contact and reside in linens, clothing, diapers, blankets, dust mops and other textile items. Microorganisms comprise many types of bacteria, molds, fungi, yeasts, etc. The majority of these organisms are beneficial to man, but some are harmful and may even be life-endangering. Among harmful bacteria are those which will give rise to disease in humans and produce odors in diapers. Molds can cause mildewing and consequent damage to fabrics.

Treatments to eliminate or control bacteria, molds and funguses in the laundry washwheel provide opportunities for use of combination products in the interest of simplifications of the wash formula and resultant savings in time and water. In such products, bacteriostats may be combined with one of the detergent materials (built soap, straight soap, or in the builder), with laundry sour, fabric softener, size, dust-laying oil, emulsifiable oil emulsion or an antilinting agent.

Considerable thought and planning, however, are required to derive maximum benefits from use of relatively expensive germicidal agents in the washwheel. After all, more than 1000 gallons of water are used in washing a 300-pound load of linens, so unless the agents are judiciously applied, costs of achieving effective results in the fabrics will be prohibitive in view of possibilities of greater dilution of supplies and dangers of losses down the drain. To avoid these, the antimicrobial agents must be exhausted onto the fabric and subsequent removal minimized by rinsing.

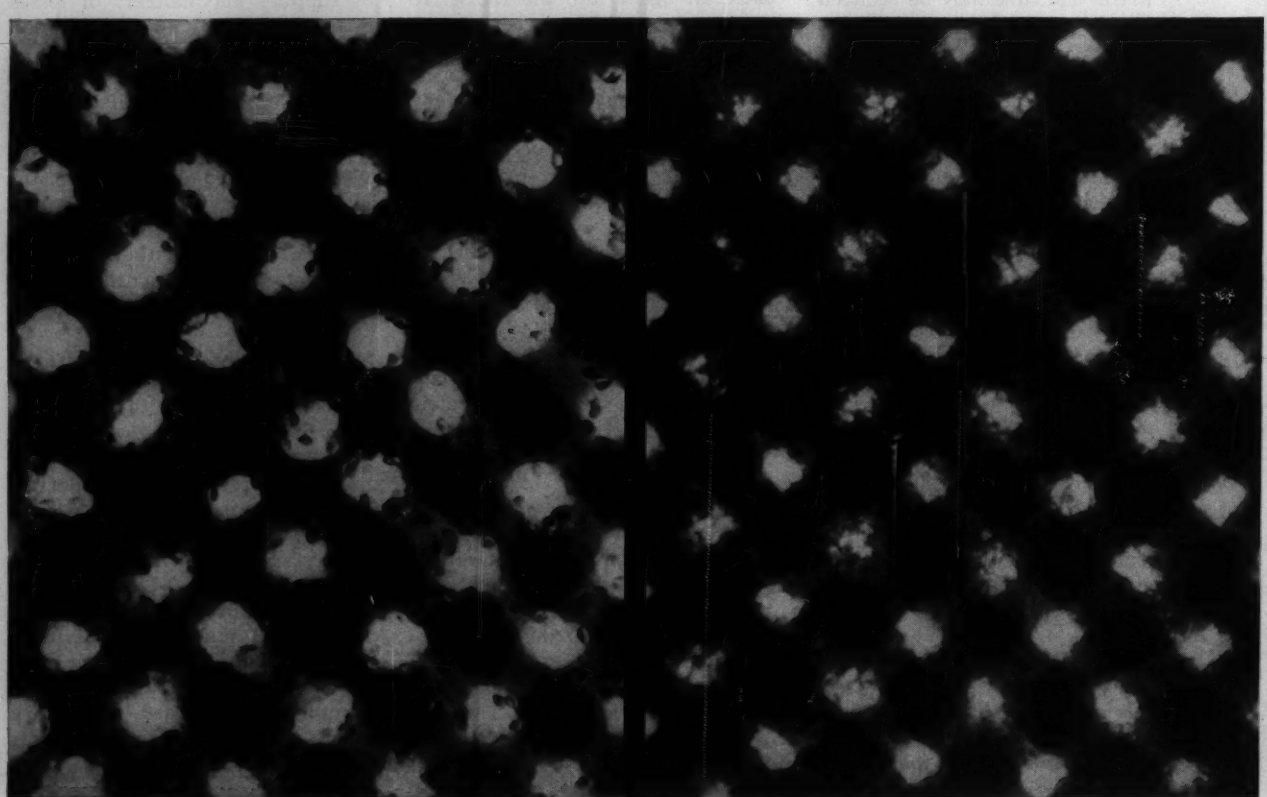
The removal problem is obviously reduced when the germicide is added to the final operation of a wash formula. But even in the final operation, the active ingredients must be deposited out of solution directly upon the fabric for optimum effectiveness. One way to achieve this is to use germicidally active, cationic surfactants which exhaust from the bath onto fabrics by virtue of electrochemical attraction.

This attractive force derives from quaternary compounds assuming a positive charge while most fabrics show a negative charge in water solutions. Since opposite charges are attracted to each other, the positive quaternary deposits on the negatively charged fabric. Dust and lint-treating oils may also be completely exhausted onto fabric when used in a combination with a quaternary compound.

The clearing up of the white emulsion of oil-quaternary baths shows that the active ingredients have become deposited onto blankets and dust mops. Another means of exhausting a sanitizer upon fabric is illustrated with sodium

Now with Velva-Soft-G

hospital linens can fight infections



These companion photomicrographs show Velva-Soft-G's effective antibacterial control on a laundered sheet placed in a suitable medium seeded with Staphylococci. At left is the untreated sheet with dark "staph" colonies growing profusely. At right is the sheet treated with Velva-Soft-G. This picture clearly shows that Velva-Soft-G inhibited bacterial growth.

What Velva-Soft-G is:

It is a special cationic fabric softener with specific antibacterial chemicals to control a wide spectrum of germs, including the antibiotic-resistant strains of Staphylococcus aureus. Because of its cationic charge, Velva-Soft-G readily attaches itself to fabric when it's applied in the last cycle of the laundering operation.

Why it was developed:

Resistant strains of Staphylococcus aureus are held responsible for patient infection in many hospitals. Velva-Soft-G was developed to help hospitals' over-all environmental sepsis program—by controlling the spread of organisms on lint. The final formula evolved from variations tested on approximately three million pounds of hospital-washed linens.

How it controls germs:

Effective with the first application, Velva-Soft-G does two important things. (Regular laundering techniques do not do them.)

1. It gives fabric an antibacterial shield which remains effective even in prolonged storage. Velva-Soft-G effectively inhibits bacterial growth all the time linens are used. It continues to be effective in the crucial time when linens are being returned for re-washing and re-treatment.

2. It substantially reduces the incidence of air-borne infection through lint control. Bacteria literally ride on the lint particles from patient to patient. Lint is caused by fiber breakage. Velva-Soft-G's lubricity reduces fiber breakage and subsequent lint formation.

Velva-Soft-G does even more:

It softens all fabrics to increase patient comfort. It eliminates ammonia formation and odor in urine-soiled linens. Velva-Soft-G controls many strains of mildew-causing fungi which can be a problem when soiled, damp linens are stored prior to washing.

It is not toxic to patients:

Hospitals have evaluated Velva-Soft-G on linens used for many months without finding a single case of dermal sensitization due to Velva-Soft-G.

It is economical:

The cost is less than 3¢ per patient, per day. This should be considered in view of the objective of controlling infection on all hospital-treated linens. Velva-Soft-G can provide certain operating economies, too. It makes the laundry load easier to handle; reduces extraction and drying time; and eliminates static electricity for faster feed through the flatwork ironer. In addition, all treated fabrics will have a longer wear life because Velva-Soft-G's fiber lubricity reduces breakage.

Organism Counts on Treated and Untreated Linens*

*Upper figure represents beginning of operation, lower figure the end.

Treatment	Suds 1st	Suds 2nd	1st	2nd	3rd	4th	Sour Bath	Over-all Avg.
Total Organisms per Ml.*								
1. *Water Only* (no load)	1 1	1 1	0 0	1 2	4 4	1 2		1.5
2. *Regular Load* (bed jackets) Never treated with germicide	130 130	20 22	100 170	130 110	225 110	165 290	320 200	155.0
3. *Regular Load* (bed jackets) Treated with Velva-Soft-G before patient use	1 0	0 0	1 1	2 1	3 2	1 0	0 0	0.9

The over-all average indicates that Velva-Soft-G apparently reduced the high growth of organisms to the virtually germ-free level of the tap water.

For technical information on clinically-proven antibacterial treatment for hospital linens with Velva-Soft-G, please write: B. J. Augst, Manager, Industrial Soap Division, Armour and Company, 1355 West 31st Street, Chicago 9, Illinois.

ARMOUR AND COMPANY

Industrial Soap Division
1355 West 31st Street
Chicago 9, Illinois

pentachlorophenate, which is very soluble in the salt form and quite insoluble when acidified in solution with laundry sour. Its insoluble form may thus be precipitated almost completely upon fabric.

By means of these techniques, scarcely any of the germicides and other treating agents need be lost down the drain. Thus, surprisingly small amounts of these materials are required. In one instance, five ounces of a material containing 20 per cent active quaternary compound per 100 pounds of fabric provides a use concentration of approximately 150 parts per million. In terms of amount deposited, this is equivalent to 620 parts per million on the basis of dry weight of the fabric. This quantity will produce effective bacteriostasis—approximately a two-mm. zone of inhibition on treated cotton fabric being obtained after repeated dosage.

Available also is a sour which is used on the basis of two and one-half ounces per 100 pounds of fabric. This provides the conventional two ounces of souring ingredient and also solution concentrations of approximately 75 parts per million of active germicides. Zones of inhibition after a single application are typically 8 to 10 mm., and no buildup occurs upon repeated use of this sour.

It must be emphasized that effective bacteriostatic and antifungal properties of treated fabric are also dependent on avoiding inactivation of the sanitizing agent by water hardness, detergents, bleach and organic matter. Fortunately most laundries have water softeners, so the adverse effects of calcium and magnesium on quaternaries and other agents are not serious problems. Tests have shown that bacteriostatic effectiveness of a good quaternary compound is only slightly impaired by water hardness up to 20 grains per gallon. But poor washing methods and inadequate rinsing of fabric in the interest of saving time can result in a carry-over of anionic and nonionic surfactants, bleach and organic constituents of soil. The depreciating effect of any anionic surfactant is especially pronounced with quaternary compounds. The effectiveness of all sanitizers is reduced in varying degrees by bleach and organic matter.

APPLICATION AND QUANTITY

Procedures of application are most important. As stated earlier, precaution must be taken to see that the treatment bath has adequate running time—five minutes is ample with products which have a natural avidity for the fabric; suitable pH—the conventional souring range of from five to six is usually all right; temperatures of 80° to 100° F. are satisfactory. Overloading the washwheel and water levels below five inches are to be avoided because this can cause nonuniformity of deposition of germicides.

After the treating agents have been applied to the fabrics in the washwheel, certain advantages and disadvantages will be noted during extracting and drying. With combination bacteriostatic fabric softeners, extraction time can usually be shortened and the drying time hastened because of the slightly water-repellent nature of the fabric softener. To avoid volitalization of oil, blankets and dust mops treated with an oil emulsion product should not be heat dried for excessive times or at excessive temperatures. Otherwise, treated fabrics may be extracted and dried in the normal manner.

Treated and dried hospital linen and diapers must not irritate or sensitize the skin of patients. The fabric must be free from odors, discoloration and boardiness. Preferably the agent should resist removal by plain water. The effective life of the protective treatment should continue during the normal service life of the fabric prior to rewashing and retreating. Antimicrobial agents and oils used to treat blankets and dust mops must not become rancid because they may cause spontaneous combustion, or otherwise create fire hazards. Use of high-grade, high-flash (greater than 325° F.) petroleum oils is indicated in these applications. ■

NOTES AND COMMENT

Bases for efficient presswork listed

Four essentials to efficient presswork production were listed by Julius Krasner, director of laundry services, Barnes Hospital, St. Louis, in a talk at the 20th annual conference of the National Association of Institutional Laundry Managers in February in Chicago.

Mr. Krasner said that the four were: (1) proper machinery installation and utilization; (2) well trained personnel; (3) types of materials and garments which can be economically laundered, and (4) adequate production and cost records.

He suggested that equipment purchases should be based on a peak week's production, not a peak day's. If volume permits, multiworker units should be purchased. Work should be specialized as much as possible, but flexibility should be maintained. He added that the full potential of any unit should be exploited before additional units are added.

Commenting on selection and training of personnel, Mr. Krasner said that employees should be selected on the basis of ability to learn, dexterity and good judgment, rather than by I.Q. level. The supervisor should see that each employee receives proper orientation and training, periodic wage increments and job advancement. He also recommended periodic job review to improve worker morale and job efficiency.

Speaking about selection of types of garments and materials, Mr. Krasner said that the simpler a uniform or other garment is (i.e., without frills, long sleeves, fancy collars and so forth), the more esthetic its appearance is and the easier it is to launder.

Summing up, he recommended that the laundry manager should prepare daily, monthly and yearly records of production and cost. Because more than 80 per cent of the presswork production department's expense is for payroll, these records are an important means of evaluating department operation and improving efficiency. ■

THIRD OF THREE ARTICLES

Contemporary Hospital Pharmacy—*its future development*

by ROBERT P. FISCHELIS, Pharm.D., Sc.D.

This is the concluding article in a series of three devoted to the subject of contemporary hospital pharmacy. In it, the author points up certain trends in the profession which will determine its future course and which will influence the practice of hospital pharmacy.

The first article in the series was published in the October 16 issue of HOSPITALS, J.A.H.A., and the second was published in the November 16 issue. The former dealt with the origin and evolution of hospital pharmacy as a specialty; the latter treated current problems in the entire pharmacy field in their relation to hospital pharmacy.

THE future of pharmacy, and particularly hospital pharmacy, is bound to be affected by the triumphs of medical knowledge and organization which have generated their own continuing dilemmas for the American system of meeting health needs. Scientific discoveries and technological advances have increased the quality of health services and simultaneously rendered them more expensive. At the same time, the need for highly skilled personnel has grown considerably at a time when such personnel must be recruited and retained in an increasingly competitive market.

Dramatic reductions in the mortality rate have been achieved at the younger age levels and the result is a newly created large and vulnerable population segment of older people with limited economic resources and high rates of chronic illness. It is constantly asserted that the American system and quality of medical care is "the best in the world". But more and more, the question is being raised whether it is as good as it ought to be for everybody in a country with such great resources in personnel and facilities, an unparalleled standard of living and a strong belief in equal opportunity.

It is difficult under these paradoxical conditions to hazard any long-term predictions as to the future of any particular specialty in a field that is so promptly affected by scientific, professional and economic developments as is the practice of pharmacy. However, certain trends are clearly discernible. It is heartening to observe the extent to which leaders in the field of hospital pharmacy are influencing the practitioners in this specialty along lines which provide for a high degree of flexibility, good communications and consistently forward-looking ethical and moral principles.

Early in the period when I was engaged in the regulation of the practice of pharmacy in the state of New Jersey (1926-1944), it became my duty to arrange for the annual licensing of pharmacies in hospitals. I expected to meet some resistance from hospital administrators to the inclusion of their respective pharmacies in the annual licensing provisions of the state pharmacy act, but somewhat to my surprise, they welcomed it.

Their explanation was that if the licensing provision was not merely a tax device to raise more for the state, but actually meant that there would be periodic inspection of their pharmacies and reports of possible shortcomings as well as evaluation of their programs and advice as to improvements, they would be glad to pay the nominal licensing fee.

Most administrators confided that pharmacy was the one professional service which they were less competent to evaluate than practically any other, so they were glad to receive constructive help from the state. This was more than 30 years ago and antedated the subsequent activities of organized hospital pharmacists in developing their specialty to the great benefit of better patient care and hospital services in general.

It must be admitted, however, that other than to require compliance with regulations as to equipment and personnel for conducting the professional services of the average pharmacy, the state boards of pharmacy, with a few notable exceptions, have not con-

Robert P. Fischelis, Pharm.D., Sc.D., is a pharmacy consultant in Washington, D.C., and past president and secretary and general manager of the American Pharmaceutical Association.

tributed greatly to the advancement of the practice of pharmacy in hospitals. A few boards have devoted themselves to elevating the practice of the profession by requiring the "internship" training of prospective registered pharmacists to be at least somewhat meaningful, but the majority have been content with much less supervision than was envisioned by the hospital administrators in the State of New Jersey when they were first approached about licensure of their pharmacies.

The more recent history of contacts between hospital pharmacy and state boards of pharmacy has not shown as much cooperation on either side as might be wished for. But there are signs of a better understanding in some places, at least. As the general public becomes more and more interested in the supervision of its medical care, regardless of where this may be provided, there is bound to be greater appreciation of the importance of every phase of the services rendered in the modern hospital, which has been referred to as "the controversial center of the medical world".

FOUR MAIN NEEDS

Even a cursory study of current trends and possible future developments in hospital pharmacy leads to the inevitable conclusion that much of what hospital pharmacy is to be depends very largely on those who practice pharmacy in hospitals. This points to the great necessity for:

1. The most careful planning for the fundamental training and continuing education of hospital pharmacists.

2. The selection of personnel who are professionally, intellectually and administratively capable of carrying on the functions of pharmacy, which are by no means static.

3. Recognition by the medical and administrative staffs of hospitals of the present character and extent of the basic education and professional preparation of pharmacists, which enables them to deliver much more than a perfunctory prescription and drug supply service, as demonstrated by their daily performance.

4. The willingness of the specialist who practices hospital pharmacy to accept the many challenges which stem from and surround his basic domain.

Fortunately, for hospital administrators and medical staffs and for hospital pharmacists as a class, the American Society of Hospital Pharmacists (ASHP), aided by the American Hospital Association (AHA) and the American Pharmaceutical Association (APhA), has recognized from its inception the importance of hospital pharmacy services as a highly essential element in good patient care. The objectives of hospital pharmacists therefore coincide with the objectives of the American Hospital Association. Furthermore, the program of the ASHP calls for participation of hospital pharmacists individually and through their society in all of the forward-looking activities required to keep hospital pharmacy, as a specialty, in the forefront of hospital service development.

EDUCATION AND TRAINING

As the longer program for education in colleges of pharmacy is developing, there is more and more recognition of the fact that pharmacists, regardless of the specialty they expect to pursue eventually, must first of all be well grounded in the basic sciences, the humanities and the professional subject on which a successful career in pharmacy depends. The tendency to rush immediately into preparing for any specialty, in all undergraduate education for the health field, is being curbed in most colleges through the advisory process involving student contact with specially appointed faculty advisers. Hospital pharmacy is presently an elective subject in the five and six-year undergraduate programs offered by colleges of pharmacy. In some institutions, it is being coordinated with internship training. Graduate programs leading to the master's degree in hospital pharmacy have been under way in some pharmacy colleges following the four-year undergraduate course, which is now on its way out.

What seems to be called for in this area is a six-year program of education leading to the professional degree of doctor of pharmacy for which the students are recruited from junior colleges or colleges of liberal arts and science and given their professional training in the college of pharmacy with a large offering of electives in subjects that have a direct bearing on the student's future specialization in hospital pharmacy. Much has been written and said about the necessity for graduate work in this field, leading presumably to master of science and doctor of philosophy degrees which are predicated upon research in pharmaceutical chemistry, pharmacology, or some related scientific area. However, hospital pharmacists need not be research scientists in the strict sense of that terminology.

As the future unfolds in hospital pharmacy service, the leadership in this field will fall to those who can work closely with hospital administrators and with the professional practitioners who are engaged in treating patients. The director of hospital pharmacy service, the chief pharmacist and those who aspire to these positions must first of all be specialists in drugs. They must also have a good knowledge of hospital supplies dealing with therapeutic processes employed in treating patients. The more these specialists know about drugs and other therapeutic agents the more valuable they become to the medical staff.

THE DRUG CONSULTANT

Because of the changing character of the therapeutic agents employed in treating patients in the various clinical classifications, it becomes essential that every hospital staff be manned by one or more experts in drug therapy. Not only should these experts know a great deal about the composition, pharmacological action, toxicology, dosage and toxic reactions of drugs, but they should actually maintain the records of experiences encountered in the application of drugs as they pass from the clinical experiment stages to routine administration. The most successful manner in which the pharmacist can acquire and keep up with current knowledge and experience in this field is to act as secretary of the hospital's pharmacy and therapeutics committee through which he

has constant contact with staff clinicians. He will not gain or hold the confidence of these clinicians unless he can demonstrate that he is keeping himself informed through wide reading and personal contact with those who are marketing the newer drugs and law enforcement agencies which regulate the distribution and pass on the claims made for such drugs. He must also demonstrate, in general, his complete integrity and ability to ascertain and transmit unbiased information effectively.

That there is need for an individual so objective in his viewpoint and so basically well trained as to fulfill these requirements is demonstrated every day in medical practice, whether it be in hospitals, clinics, or the offices of private practitioners. That individual pharmacists have recognized the need for such service and are preparing themselves for it is demonstrable. That there are many hospital pharmacists loaded down with the routine of their daily tasks of providing prescribed medication, who have neither the time nor the inclination to give this broader and much needed service, is also demonstrable.

Very recently, a specialized Institute on Hospital Pharmacy, sponsored by the AHA and the ASHP, was devoted to "hospital pharmacy and rational drug therapy". Here the need for continuing education in this field was amply demonstrated. One of the guest lecturers endeavored to raise the sights of the hospital pharmacists in attendance to new heights when he outlined the urgent need of clinicians for information about drugs which could be supplied by pharmacists through a perfectly logical extension of their customary services in hospitals. By becoming responsible for recording all patient reactions to drugs and arranging to have such information available for clinicians when it becomes necessary for the latter to evaluate and determine the "drug of choice", pharmacists will add a highly significant service to their professional function.

NEW RESPONSIBILITIES

To serve acceptably in the capacity here envisioned, hospital pharmacists must rise to new heights of responsibility. This poses a challenge from several angles. Not only does the clinician confronted with an unusual case want the latest, authentic word about favorable and unfavorable experiences with a drug, but he is interested also in the history of the administration of the drug in the hospital where he practices. This calls for day-to-day notation of patient reactions, be they favorable, adverse or without apparent significance. Whatever the protocol at the hospital may call for with respect to where such information comes to rest, it would be the pharmacist's job to gain access to it and to have it available. This involves contact with the medical record librarian, the nurse, the clinician and possibly even the patient. Just as someone is designated to take the case history of the patient, so the pharmacist would be designated to record the case history of the drugs used in hospital practice. Once the pharmacist has demonstrated his ability to become this kind of an

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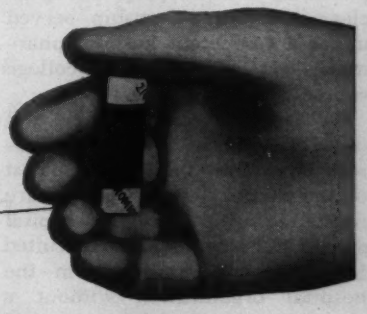

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expert, his value in helping to assess the information that comes from producers of drugs and their representatives is established and he has added a function to the practice of pharmacy which must be rated high in providing better patient care.

Obviously, it cannot be assumed that every pharmacist will be competent to function in this capacity, but just as the clinician develops his reputation in actual practice, so the pharmacist would become more and more expert in drug evaluation as he accepts this responsibility.

The aid of hospitals has been enlisted by the federal Food and Drug Administration in its efforts to be made aware of unfavorable reactions brought about by the use of new drugs. Assignment of this function within the hospital organization can readily be solved by turning it over to the pharmacist, who should also be the individual prepared to supply information dealing with antidotes to combat accidental poisoning from medicinal and technical products through internal or external contacts.

SELECTION OF PERSONNEL

Every pharmacy graduate is not necessarily a good potential hospital pharmacist. Trends and developments in hospital pharmacy clearly indicate that a revised set of personality and intelligence criteria should be evolved for the selection of hospital pharmacists. If the selection is based purely on educational qualifications, salary and availability of the applicant, one cannot be certain that the best interests of the hospital or the applicant will be served. As hospital pharmacy is developing, it is quite clear that an internship served under a competent hospital pharmacist, in addition to a college course is indispensable.

Professional competence and other characteristics which will assure confidence in the pharmacist on the part of the medical staff are prime requisites. In short, hospital pharmacists should not be recruited for responsible positions in the hospital organization without a previous background of practical experience in this field under a competent practitioner and unless they have shown ability and initiative in meeting current problems. Eventually the individuals selected for administrative positions in hospital pharmacy will probably have to qualify in the same manner that physicians now qualify as specialists through one of the specialty boards.

The line of advancement of the hospital pharmacist is very important to the individual, but it is also important to the institution. In the long run, the institution will be served best by seeking a person qualified by experience and education equivalent to meeting the modern professional degree of doctor of pharmacy and eligible to become a diplomate of a hospital pharmacy specialty board.

Continuing education for all hospital pharmacists, from the top down, should be made an absolute requirement for those who direct pharmaceutical practice as well as those who discharge the professional function of the hospital pharmacist. Such continuing education is provided through the hospital pharmacy institutes. But in addition to formal participation in the institutes, this continuing education must take the form of keeping in constant touch with the literature of hospital pharmacy, therapeutics, pharmacology and, of course, pharmacy and pharmaceutical chemistry. Here the American Society of Hospital Pharmacists would do well to provide some form of advanced correspondence courses or closed television or radio education.

The influx of more complete literature on drugs, which will be demanded by law and regulation in the immediate future, will go for naught if pharmacists, especially in hospital practice, are not made responsible for transmitting essential information needed by general practitioners for the best interests of their patients.

INTERPROFESSIONAL RELATIONS

Interprofessional relations in hospitals with respect to drugs are presumably initiated through the pharmacy and therapeutics committees. Discharging the functions of the secretary of this committee offers a most acceptable way by which the pharmacist and his colleagues in the hospital pharmacy can maintain their liaison with the medical staff. Teaching or participating in the teaching of pharmacology, dosage and other portions of the nursing curriculum is one of the best ways for the pharmacist to keep in touch with the nursing profession and should be a most useful liaison in bringing about a more complete understanding of the borderline functions of these professions with respect to drugs. With the trend toward mechanizing all record-keeping and the trend toward supplying single-dose medication, problems have arisen and will continue to arise with respect to specialization in the area of medication by nurses. Before this possible conflict of functions results in administrative and professional difficulties, the studies which are already under way in this field should be reviewed and conferences to bring about a meeting of minds on what could become a highly controversial and irritating problem should be promoted.

As the use of valuable, but frequently toxic, drugs becomes more and more common, it is important that the responsibility for calculating the risks involved to the fullest possible extent should be shared with clinicians by those who specialize in the pharmacological and other actions of drugs. Performance of this service requires utilization of the hospital records, the study of clinical reports and other sources of information which are more readily available to pharmacists than to nurses. Under no circumstances should clinicians be made to feel that their only source of information in this highly important area is the representative of the producer or such literature as he may happen to find in an emergency.

Finally, the acceptance of the challenges which stem from the domain of hospital pharmacy, require renewed dedication on the part of hospital pharmacists to assist hospital administrators in various management, purchasing, supply, storage and housekeeping problems. Hospital pharmacists frequently view prospects of advancement in rank and pay as dim if they propose to stay within the confines of their own profession. Both in military and civilian hospital pharmacy organizations, phar-

(Continued on page 104)

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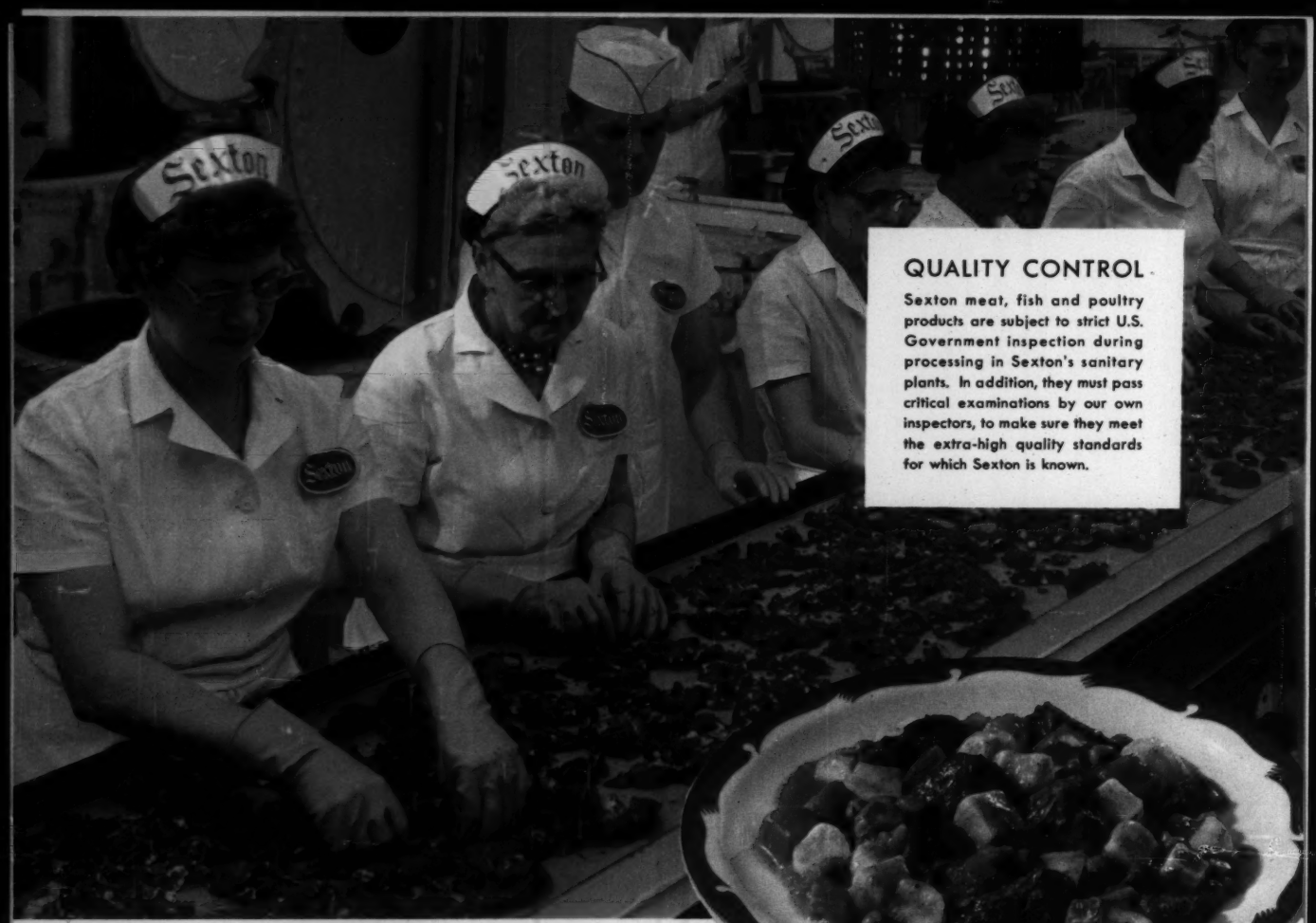

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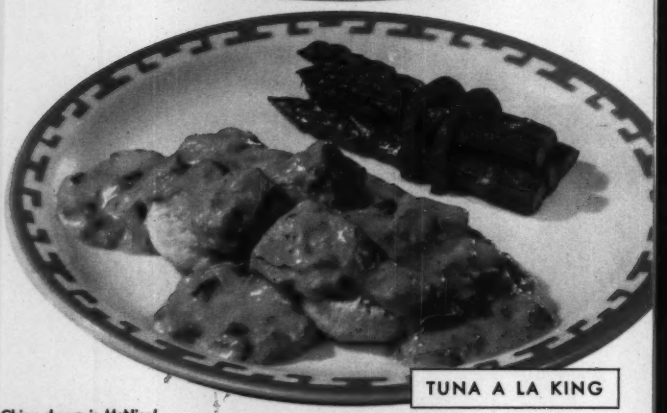

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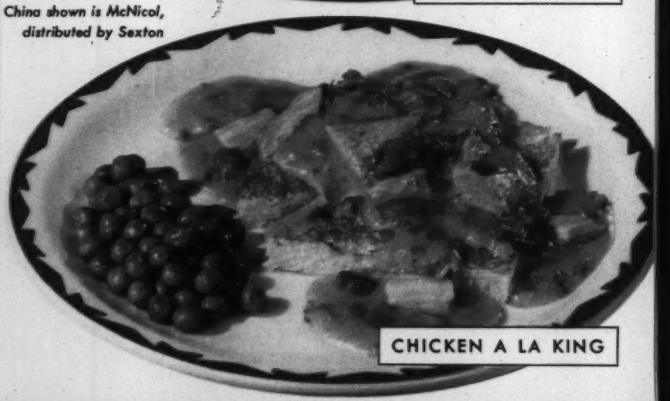

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SOLDIERS in recent field exercises are following directions to "add boiling water and soak" certain freeze-dried foods in Quick-Serve Meals developed for military use. Such meals may be prepared in 20 minutes.

DEHYDRATED FOODS:

Military Experiments Foreshadow Future Hospital Uses

by FRANCES HEMPHILL LEE

The development and use of new types of dehydrated foods, especially those prepared by freeze-dehydration, are described by the author. Although many of these foods were developed primarily for military uses, some of them are already available commercially and may be used in hospitals, she states. The same properties that make them advantageous for soldiers' rations—their light weight, keeping qualities and elimination of many steps in food preparation—also increase their value for hospital food service, according to Mrs. Lee.

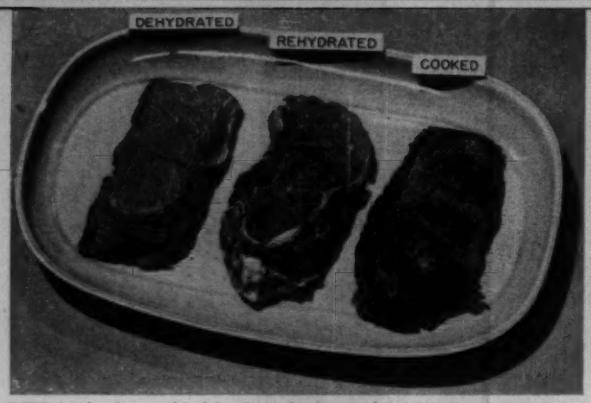
THE BASIC METHOD of preparing dehydrated foods has not changed since man soaked his sun-dried meat and seeds in water all night and cooked them all day for his midwinter supper. The main change has been in dehydration methods which produce cooked foods that can be dehydrated rapidly and eaten without further preparation. The acceptability of these foods is far better than that of earlier products because the original shape, flavor and vitamin content of the freshly harvested food is preserved. In many cases, these foods are considered better than canned or frozen types.

Other special advantages of the new dehydrated foods include utility, economy and stability. Cleaning, trimming and portioning of the food before dehydration eliminates kitchen equipment and waste disposal problems. Being lightweight and less bulky than other types of processed foods, they are easier to handle and store. Since preparation is simpler, the quality of food production in the kitchen can be controlled more uniformly. Economically, there is a reduction in packaging and transportation costs because the water content of food is reduced from a range of 70 to 90 per cent in fresh foods to between 2 to 7 per cent in the dehydrated varieties. Stability in storage is excellent; products properly packaged in moisture- and vapor-proof containers will keep many months in a cool storeroom.

The drying method which makes this possible is freeze-dehydration, which in itself is an application of an old practice—drying clothes in subzero weather in the sunshine. Frozen food is placed in the dehydration chamber where a vacuum can be created so that water will evaporate at low temperatures. The food gives up its water content without thawing, and a porous solid remains. Freeze-drying results in the least possible change in the physical characteristics of the product and is particu-

Frances Hemphill Lee is chief of the Experimental Kitchens Branch, Food Division, Quartermaster Food and Container Institute for the Armed Forces, Quartermaster Research and Engineering Command, U.S. Army, Chicago. This article is adapted from a presentation before the Food Service Research Society, February 1961.

The paper reports research undertaken at the Quartermaster Food and Container Institute for the Armed Forces, QM Research and Engineering Command, U.S. Army and has been assigned Nr. 2117 in the series of papers approved for publication. The views or conclusions contained in it are those of the author. They are not to be construed as necessarily reflecting the views or endorsement of the Department of Defense.



(LEFT) In the freeze-dried beef steak above, the original volume of the food is not reduced considerably. The removal of water leaves such foods porous lightweight solids. (RIGHT) Fresh apples and equivalent amounts of dehydrated and rehydrated applesauce. Directions for preparing dehydrated foods vary in the temperature of the water recommended and the length of the soaking period.

larly applicable to meats and succulent types of fruits and vegetables.

Many foods prepared by freeze-dehydration are already available commercially for institutions and for certain specialty uses such as camping. Precooked products include shrimp, chicken, and combinations such as soup mixes, chicken stew and beef stew. Freeze-dried foods which require cooking after dehydration are eggs, steak and pork chops.

While freeze-dehydration is the method of choice for many foods, different drying techniques at higher temperatures result in superior results for other food products and are more economical. In tunnel and belt dehydrators, foods such as potatoes and cabbage are exposed to a moving stream of heated air in a temperature range from 140° to 200° F. When the food to be dried can be made into a paste or slurry, such as mashed potatoes or tomatoes, it may be spread on a rotating, steam-heated drum to dry. Liquids are frequently dispersed in fine droplets and dried in an upward-flowing warm air stream. This spray method is normally applied to milk, eggs and coffee. Some products which are quite sensitive to heat, such as fruit juices, can be concentrated and dried by the vacuum process at lower temperatures. There are many variations of these methods.

Dehydration methods alone cannot be credited with the wide variety of foods now available for our use. The whole technology of food production has contributed. For instance, the food must be cut correctly to permit proper reconstitution—in meats, muscles should be cut across the grain. In corn, the kernel must not be cut more than three-fourths the depth. Each green pea must be split about one-fourth inch. Precooking must be carefully controlled so the product will be tender, yet not mushy. Immediate cooling is necessary to prevent microbial growth. Even the freezing must be carefully controlled so that the ice crystals formed in the foods will be the right size. Cottage cheese frozen too fast will be powder.

QUICK-SERVE MEALS

For the military, these new precooked dehydrated foods are being utilized in the development of a simplified feeding system for small combat groups. The ration made up of these foods is called the Quick-Serve Meal.

A seven-day menu cycle of Quick-Serve Meals, packed in cases for highly mobile military units of 6 and 25 men, has been designed. Any soldier can prepare a hot meal by simply opening the laminated-film, foil-lined carton containing the food, adding hot or cold water as indicated, and stirring. A complete meal is ready in 20 minutes. Foods include 12 freeze-dehydrated meat, vegetable, and fruit items, 21 air- or vacuum-dehydrated foods, 24 mixes for soups, gravies and puddings; 4 instant crystal juices, and 4 instant beverages. To complete the menu, tubed bread spreads plus canned bread and cakes are included, as well as equipment for heating the water, mixing, serving and eating the food.

The preparation techniques for the typical supper menu below require no specialized cooking skills on the part of the soldier.

Apple Juice
Chicken and Gravy
Rice
Seasoned Mixed Vegetables
Bread Military Spread
Chocolate Nut Roll
Coffee
Cream Sugar

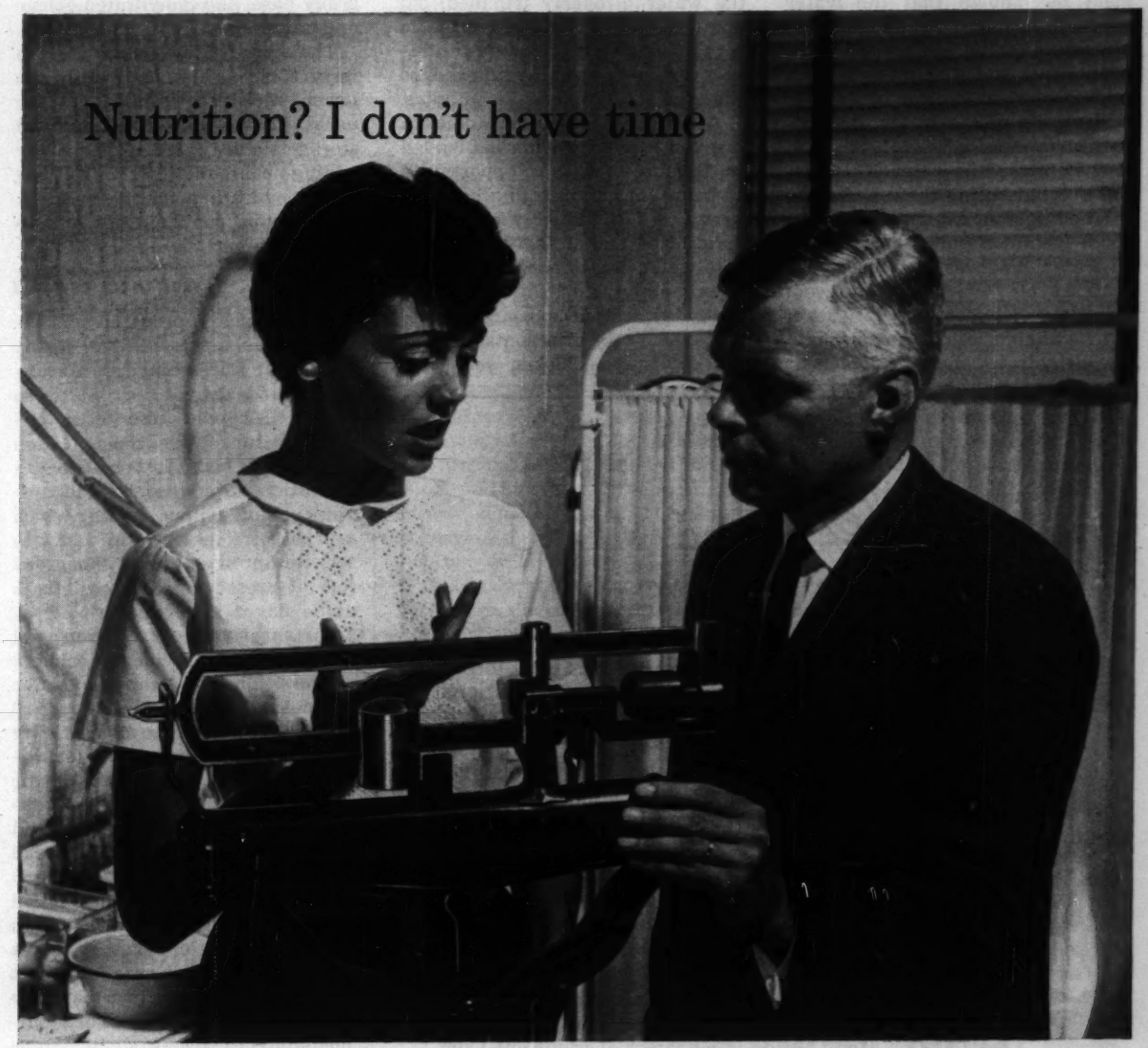
He heats water, and follows the mixing order and label directions for each food. After boiling water is added to the food, the temperature is approximately 190° F. The carton acts as an insulator to retain the heat, so that after 30 minutes the temperature of the mixture will be between 150 and 160° F.

ADD WATER AND EAT

Mixed vegetables are prepared first because of the varying rehydration times of the different vegetables. The freeze-dehydrated peas are rehydrated practically instantaneously, but the more starchy corn tastes better if it stands 20 minutes. Carrot dices take about the same time to plump out. Seasonings and a gelatin shortening capsule are packed with the vegetables. The gelatin capsule melts in about three minutes. However, the cook is cautioned to check to see that it has disintegrated and blended in at serving time.

In this dinner, chicken and gravy should be prepared next. Moisture-vapor-transfer studies have shown that chicken and gravy may be packaged together. In preparation tests, however, it has been noted that the starch in the gravy may adhere to the chicken and prevent complete rehydration. For this reason, the gravy is packaged separately, and the package should be removed from the carton before adding the near-boiling water.

One study on the mechanisms of rehydration in freeze-dehydrated



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meat has shown that the water goes up through the air sacs remaining after the ice crystals have evaporated, much as oil goes up a wick. So when a piece of meat is laid on top of the water, it is rehydrated more efficiently than if it is immersed in water. This does not preclude using the rehydration method of pouring water over the food. Instant submergence of food in water, however, may cause entrapped air which may prevent complete rehydration. Whenever the available equipment permits, the dehydrated meat is floated on the water. Properly trimmed, cut and cooked meat will rehydrate in 5 to 10 minutes; however, 5 minutes extra is usually allowed so that the total time is 15 minutes.

After all pieces of the chicken are wet, the gravy mix is blended in. Because there is no opportunity to bring the mixture to a boil, the gravy is formulated with a pregelatinized starch that will blend into water at a temperature of approximately 170° F. to form a gravy typical in appearance and taste. The mix also contains nonfat dry milk, chicken soup and gravy base, and dehydrated celery and onions.

The starchy item in the meal is instant rice. This product has a lower moisture level than the usual instant rice for improved storage stability. It is prepared by adding near-boiling water, stirring and rehydrating for 10 minutes. The carton contains salt and a shortening capsule.

FRUIT JUICE CRYSTALS

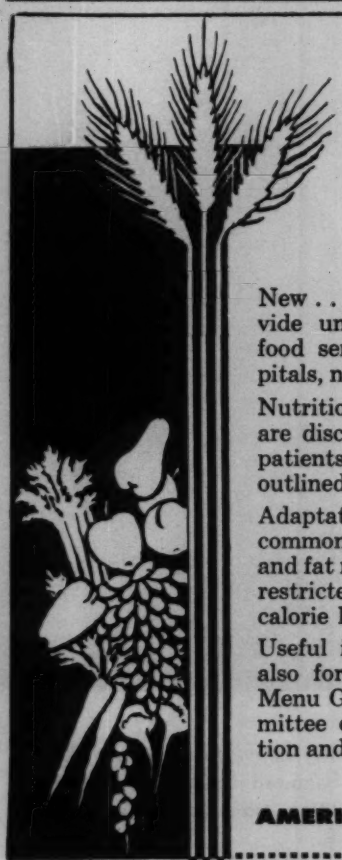
Apple juice is prepared for this meal. It is representative of the pure fruit juices that are concentrated and dehydrated. In apple juice, the apple essence is entrapped during the concentration and added back just before dehydration. In addition to the convenience of a juice crystal which will dissolve instantly in cold water, this product solves the problem of preserving a typical fresh apple flavor in the beverage.

Instant coffee, dry cream and sugar are in individual packages so the soldier can make his coffee whenever he wants it.

All the foods in the Quick-Serve Meal are not dehydrated. The military spread, packaged in a plastic squeeze tube, is a margarine without milk solids that will remain in a solid state at 95° F. The bread and cakes are canned.

Development of the canned bread has been very important because we now have a loaf that has a light color and typical texture. The bread is baked in a partially sealed can and then sealed immediately. You, no doubt, have heard many times, "Change the shape of an object to make it more acceptable." When this bread was sliced crosswise, the soldier received a round slice of bread which he could immediately identify as "canned". On a field test, one of the sergeants suggested that the bread be cut lengthwise. Many testers do not recognize the item as canned when it is sliced this way. The cakes may be cut this way also, but generally they are cut in six thick slices or chunks. The chocolate nut roll may be cut in half and then sliced thin.

By the time the plate, plastic spoons and knives, cups, and accessory packages are arranged for pickup, the foods will be completely rehydrated and ready for



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service. The compartmented latex-coated paper plate is waterproof and greaseproof. This plate is sufficiently rigid so that it will not collapse from the weight of the food. These tray-plates enable the soldier to pick up his meal and return to his dispersed position. All of the utensils are disposable, thus eliminating the operation of cleaning and sanitizing mess trays and spoons.

APPLICATIONS TO HOSPITALS

Apart from this radical type of preparation of dehydrated foods, consideration should be given to how preparation in both small and large quantity food service operations can benefit by inclusion of some of the items. Many of the items are commercially produced and are being merchandised for both institutional and home use. Some of the other foods are not as widely publicized, but have an even greater potential use in our expanding food service.

Juice crystals offer the fresh flavor and nutrients of pure juice that had formerly been available only in the frozen concentrates or just after manufacture. These items can be stored at ambient temperature and permit savings in time needed for handling and chilling. Only the quantity needed can be mixed as it is to be served, for the crystals dissolve readily in cold water. Apple, grape, grapefruit and orange juice crystals are available.

The precooked chicken and precooked shrimp have the greatest potential for food service because their use eliminates many preparation steps that are laborious and time-consuming. The cooking, cooling, boning, or shelling steps in preparation, as well as the need for equipment such as pans and cooler space, are eliminated. These items make it possible for cooks to serve specialty dishes of chicken and shrimp with minimum preparation time. For our Shrimp Creole Gumbo, we prepare the sauce while the shrimp are soaking in lukewarm water; the rehydrated shrimp are added, the mixture is heated to just below boiling temperature, and served.

In addition to the "wick effect" in rehydration of meat, other aspects of preparation have been studied: the temperature of rehydration water, use of salt and other additives in the water, length of soak, and cooking time. Raw beef and pork are best rehydrated in a lightly salted water (1 teaspoon per quart) at a temperature between 70 to 90° F. Twenty to thirty minutes is the average soaking time. The drained meat can be breaded, if desired, and grilled. Usually, 1 minute per side browns the meat and makes the inside juicy and tender. For best acceptance, the grilled dehydrated meat should be served immediately. In making stew, dehydrated or fresh vegetables can be cooking while the meat is soaking. The vegetable mixture can be seasoned and thickened, and then the browned meat pieces added. No further cooking is necessary, for the meat is flavorful, tender and juicy.

Precooked meats, such as sliced roast beef, meat loaf, pork slices, pot roast and ground meat, may be rehydrated in cool water and then heated to serving temperature. Another method is to rehydrate these foods in water at a temperature between 180 to 190° F. Boiling water (212° F.) makes the cooked meat tough and should not be used.

INSTANT REHYDRATION

Very rapid rehydration, 10 seconds, is characteristic of some of the prefried meat and fish mixtures. These include fish cakes and fish balls which retain their crisp fried texture. These have a potential use for appetizers in many food service operations. A limited number can be prepared for immediate needs. If more are needed, additional fish balls can be rehydrated for replenishing the service. Powdered cheddar cheese should be considered in this category of foods because it can be made up instantly and used for dips and sauces. Freeze-dehydrated cottage cheese may also be rehydrated instantly and when mixed with a little milk and seasoning may be used immediately. I do not want to make these items sound like a great emergency food shelf, but this is one area where their potential is outstanding. Remember, many of the fresh counterparts of these foods require valuable refrigerator space and the length of time that they can be held is limited. The dehydrated foods can be held in storage at room temperature without any change in quality.

Even dehydrated eggs are undergoing a change. A precooked freeze-dehydrated cake of scrambled eggs is instantly delicious after the addition of boiling water. With a flavor as good as fresh scrambled eggs, it too can become a great convenience food for people who live alone and dislike cooking. A scrambled egg mix has been dehydrated that appears to have very good stability. Such a product eliminates many steps for preparing scrambled eggs.

For installations where regular dehydrated eggs are being used, our preparation techniques and recipes are being revised. For a menu item utilizing dehydrated eggs, it has been found that fat can be mixed with the omelet batter and the recipe changed slightly to produce an "egg pancake". The item had a much higher acceptance than when listed as "omelet".

The use of dry whole milk and instant nonfat dry milk has many implications for food service. It eliminates handling and storing milk cans. In food preparation dry milk products can be used either in the dry form or reconstituted with water and added as regular milk. The cook may blend them into his own white sauce mix. In certain recipes, such as for pancake batter and cream soups, the addition of 1 ounce of butter or shortening to each quart of nonfat milk will guarantee a flavor as good as recipes made with fresh milk. Dry whole milk should be mixed with warm water. Sauces and gravies should be kept below boiling to prevent a rough texture.

DEHYDRATED VEGETABLES

The vegetable field practically speaks for itself. With the increasing use of dehydrated potato granules, flakes and slices, people in hospital food service will want to evaluate their equipment needs for preparing these types of potato products. Dehydrated diced or sliced potatoes may be used for making hash brown potatoes. One other vegetable that has not been mentioned is freeze-dehydrated spinach. The product has the flavor

of fresh cooked spinach and is an item that can be stocked for the occasional order. Raw dehydrated cabbage is a space and labor saving food that may be used for making coleslaw. When the cabbage is mixed with a few fresh ingredients, it has as high an acceptance as fresh cabbage slaw. All of these fruit and vegetable items would be extremely important ingredients in areas where refrigeration is limited, and shipping space and weight are at a premium.

Many of these dehydrated foods were developed and formulated to make a "Quick-Serve Chef" out of any soldier. They can, in turn, increase the efficiency of hospital food service by saving money in shipping and storage, by eliminating many of the prehandling and preparation steps required for a finished product, by allowing the chef more time to utilize his talents, and by giving the manager of food service a better control over recipe production and portions. In addition to all these advantages, patients and personnel will find these new dehydrated foods good to eat.

ADA Convention Report

Dietitians study management, nutrition and emotional reactions to food

The versatility demanded of today's hospital dietitian was reflected by the program of the 44th annual meeting of the American Dietetic Association in St. Louis in October. Dietitians attending this meeting were served generous portions of information on such varied topics as fiscal control, quality food, food for psychiatric patients and the relationships between drugs and diet.

The multiple problems of the dietitian were summarized by John J. Zugich, assistant director, University Hospital, University of Michigan Medical Center, Ann Arbor, as follows: Demands on dietitians "to satisfy physicians, their sick and convalescing patients, the hospital administrator, and even the lunching employee are formidable. Some expect quality, some expect economy, some want sympathy and others want scientific knowledge."

'SOME EXPECT QUALITY . . .'

That the patient's view of hospital food is favorable on the whole was revealed by a number of surveys of patient opinion, summarized by Jacob Feldman, director of research, National Opinion Research Center, University of Chicago. He stated that the "highly prevalent stereotype" about the lack of quality of hospital food is not borne out by surveys of patients' recollections of their hospital experiences. Preliminary results of a survey currently being conducted indicate that patients' impressions of food are even more favorable than reported in earlier surveys.

The problem of reconciling the patient's emotional standards for food with the hospital dietitian's intellectual standards was analyzed by Elizabeth McCune, associate director of the Department of Nutrition, University of Kansas Medical Center, Kansas City. Miss

ADELIA M. BEEUWKES (left), professor of public health nutrition, University of Michigan School of Public Health, Ann Arbor, began her duties as president of the American Dietetic Association during the 44th annual meeting of the ADA in October. President-elect is Edith A. Jones (right), chief, Nutrition Department, The Clinical Center, National Institutes of Health, Bethesda, Md.

McCune told of a food preference survey conducted among patients and personnel which revealed food likes and the relative frequency with which food could be served. Some foods, such as roast beef and fried chicken, were so popular that they could be served three times a week.

These food preferences were used as a guide in preparing a selective cycle menu. Even if an item, such as roast beef, was served three times a week, some variety was achieved by giving it different names. Roast beef might also be called Yankee Pot Roast or Roast Beef au Jus. While the preferences of patients and personnel were heeded in the choice of menu items, the dietitian's standards for food preparation were followed. A three-year trial of menus planned in accordance with these principles has resulted in satisfaction for all.

Some of the limitations of selective menus were uncovered in a study reported by Margaret A. Ohlson, director, Department of Nutrition, State University of Iowa Hospitals, Iowa City.

In a study conducted in various departments of the State University of Iowa Hospitals, the need for selective menus was related to sex of patients and to length of patient stay. Women patients and patients in the hospital for longer than average periods were most likely to appreciate the freedom of choice made possible by a selective menu.

For patients whose nutritional rehabilitation is vital to their recovery, Miss Ohlson suggested that a special unit in the hospital might be advantageous where freedom of food choice could be offered even beyond that offered in a selective menu. Such a unit might have its own kitchen which would prepare foods for the patients on a de-

mand basis. The expense of such a unit would be justified by its value in rehabilitating certain patients, she stated.

'SOME EXPECT ECONOMY . . .'

At a panel discussion on food service management, various speakers presented the viewpoint of a hospital administrator, a director of dietetics, a contract food service company and a consultant service for small institutions.

From the viewpoint of the hospital administrator, Mr. Zugich stated that the professional dietitian is measured first as a manager of persons and things, and second for her technological and scientific knowledge. He cited the need for more delegation of authority in departments of dietetics and a need "to blend the philosophy of proper food for the sick with the organizational and logistical problems in hospitals".

How the services of a shared consultant have improved food service management for a group of small liberal arts colleges in Illinois was described by Loyal E. Horton, director of food services, Associated Colleges of Illinois. He suggested that the same type of shared consultant might be utilized by a group of hospitals who wish to retain control of their own food service operation, while having access to specialized skills. He emphasized that the success of his program is due to the fact that it is "a consulting situation with continuity".

Cost of dietary department operation, which one speaker estimated takes one-fifth of the total operating costs for hospital care, comes under increasing scrutiny because of public concern over the rising cost of hospital care. At a series of all-day meetings on "Fiscal Control", Stephen W. Vasquez, C.P.A., dean, School of Commerce and Finance, St. Louis University, discussed budgets and other types of reports as means of achieving hospital goals.

He emphasized that budgets and other fiscal reports should not be considered as an end result, but should be used to control future performance. He recommended that financial reports should show deviations from standard or desired performance so quickly that they can be used as a guide to the future.

'SOME WANT SYMPATHY . . .'

According to one speaker, one of the aims of food management should be "assuring sympathetic and individualized services". Even in sessions devoted to management, the consensus was that recognition of the psychological implications of food and the comfort it contributes the patient's hospital stay should pervade the operation of the dietary department.

The importance of the patient's emotional reaction to food was discussed in relation to such varied problems as modified diets for diabetics, the prevention and treatment of childhood obesity, and the rehabilitation of the psychiatric patient.

At a meeting devoted to trends in food service for psychiatric patients, the "extras" for patients who are on the way to recovery were discussed by Elizabeth Miller, assistant dietitian, Eastern Pennsylvania Psychiatric Institute, Philadelphia. Such "extras" include food for picnics in the summer, refreshments for parties and birthday cakes.

David A. Gee, associate director of the Jewish Hospital of St. Louis, described the "permissive" attitude about patients' food in the psychiatric unit of his hospital. Patients are allowed as much choice as possible in the kinds and amounts of food, on the basis that this freedom removes one source of conflict in the patients' relationship with the hospital staff.

While this type of food service is higher in cost than cost of food for other patients in this hospital and for average food cost in mental institutions, it is believed to pay dividends in speed of rehabilitation.

The concept of "progressive dietary management", in which the type of food service is adapted to aid the patient's progress toward recovery and rehabilitation, was discussed by Margaret C. Madden, chief dietitian of the Philadelphia Psychiatric Hospital. She recommended that upon the admission of a psychiatric patient to the hospital, the dietitian become involved at once in the problem of treating him. In the early stages of treatment, adequate liquids may be important, and soft foods may be prescribed to aid ease in swallowing and spoon feeding. She stated that the dietitian should become aware of the changes in the desire for food in psychiatric patients—the characteristic lack of appetite in the depressed patient and the hunger drive in the disturbed patient.

If food means a great deal to the patient, privileges in eating may be used as motivation to self-improvement. Eating in a cafeteria with its socialization and freedom of choice is a step to the outside world. The dietitian can contribute to the patient's recovery in the latter stages of his hospitalization by visiting with groups of patients in the cafeteria and by providing nutrition education.

'. . . SCIENTIFIC KNOWLEDGE'

Intelligent cooperation is needed between the dietitian and the physician in order to minimize the problem of interactions between certain drugs and nutrition, according to Seymour L. Halpern, M.D., clinical associate in medicine, New York Medical College-Metropolitan Medical Center.

Dr. Halpern stated that certain drugs, although valuable adjuncts to modern medicine, have profound effects on appetite, body metabolism and gastrointestinal tolerance. They consequently affect the patient's nutritive needs. He mentioned in particular three types of drugs:

—diuretics which affect the body's salt balance and may increase the need for water-soluble vitamins including vitamin C and the B vitamins.

—antibiotics, which suppress intestinal bacteria and have a related effect in increasing the need for certain vitamins. Antibiotics may also cause gastrointestinal intolerance.

—cortisone-like drugs, used for their antiallergic effects as well as for treating arthritis, which affect the body's salt and protein balance and sometimes cause excess gastric acidity.

He stated that some drugs may have a favorable effect on nutrition. Tranquilizers, for instance, may improve the patient's food intake by relieving nervous tension.■

equipment and supply review

New product descriptions included in this section are condensed from reports furnished by manufacturers and distributors. Descriptions are included here for informational purposes and such inclusion does not constitute endorsement by the American Hospital Association.

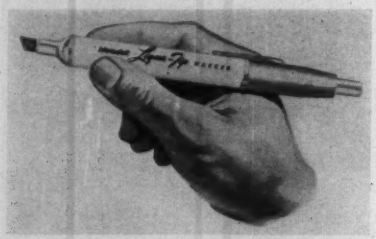
Plastic wastebaskets (24F-1)

Manufacturer's description: Available in white or granite gray, and in either round or square design, these wastebaskets resist corrosive effects

of syrups, soaps, acids and other wet waste and will not rust. Sizes range in height from 23½ to 32¼ in. and from 13¾ to 19¼ in. in diameter. *Rubbermaid Inc., Dept. H24, Wooster, Ohio.*

Felt marker (24F-2)

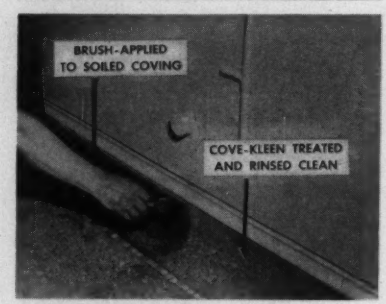
Manufacturer's description: This felt-tip marker has the long slender look



and feel of a pen with the convenience of felt-tip marking and is available in eight colors. Other features include a convenient pocket clip, cap storage on the marker and an ample ink supply. *Blaisdell Pencil Co., Dept. H24, Bethayres, Pa.*

Brush-on cleaner (24F-3)

Manufacturer's description: Designed for use on terrazzo, vitreous and plastic tile coving and mop boards, this self-acting cleaner of gelatin consistency penetrates accumulations of soil and wax and is applied by brush, thereby forming its own poultice. The cleaner quickly performs complete penetrating action, after which the loosened soil can be rinsed clean with clear water. Packaged in 55 gal. drums,



or 5 and 2½ gal. pails. *Hadco Corp., Dept. H24, Chemical Bldg., Center & Spruce Sts., Cleveland 13.*

Whole egg substitute (24F-4)

Manufacturer's description: To replace shell eggs in scrambled egg servings and frozen whole eggs or shell eggs in baking, this product incorporates a conversion table that is printed on each can. Requiring no refrigeration, one

can, plus 6½ cups of water yields 30-35 scrambled egg servings. Complete equivalent tables and recipes are packed in each case of 24, 1 lb. cans. *Seymour Foods, Inc., Dept. H24, Box 116, Topeka, Kans.*

Disposable irrigating syringe (24F-5)

Manufacturer's description: This 2-oz. irrigating syringe with catheter tip is primarily used for irrigating catheters and intubation tubes in nursing and surgical procedures. The shatterproof, polypropylene irrigating syringe can also be used for gastric sampling, inflation of catheters during cystoscopy, irri-

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▶ If you wish to have your name sent direct to the manufacturers of products and distributors of literature described in this review, check the appropriate items on this coupon, sign your name and address, clip and mail to the Editorial Department of HOSPITALS, J.A.H.A., 840 North Lake Shore Drive, Chicago 11, Illinois.

PRODUCT NEWS

_____ Plastic wastebaskets (24F-1)
_____ Felt marker (24F-2)
_____ Brush-on cleaner (24F-3)
_____ Whole egg substitute (24F-4)
_____ Disposable irrigating syringe (24F-5)
_____ Merchandise in motion (24F-6)
_____ Electric file system (24F-7)
_____ Portable air conditioner (24F-8)
_____ Disposable syringe (24F-9)
_____ Folding shield (24F-10)
_____ Traction bandage (24F-11)
_____ Portable serving cart (24F-12)
_____ X-ray unit (24F-13)
_____ Blood loss measurement (24F-14)

PRODUCT LITERATURE

_____ Tilting device for hospital beds (2FL-1)
_____ Food preparer (24FL-2)
_____ Electric food dicer (24FL-3)
_____ Continuous bubble tubing (24FL-4)
_____ Sterilizer control system (24FL-5)

NAME and TITLE _____

HOSPITAL _____

ADDRESS _____

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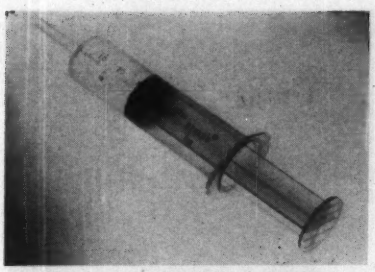
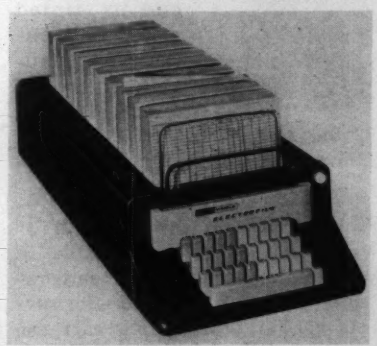


gating wet dressings and injecting petrolatum prior to rectal surgery. *Pharmaseal Labs., Dept. H24, Customer Service Dept., Glendale 1, Calif.*

Merchandise in motion (24F-6)
Manufacturer's description: The continuously moving trays of merchandise

enables every item to be thoroughly displayed and provides a customer self-selection factor that encourages impulse purchases. These restyled cabinets, built around an aluminum frame, feature interchangeable exterior panels in a wide variety of wood and Formica finishes to harmonize with room decors. *The Berg Co., Dept. H24, Madison, Wisc.*

Electric file system (24F-7)
Manufacturer's description: Capable of handling thousands of file, record



or data cards, this file system practically ends the procedure of refiling because of the fact that after use, the cards can be put back at random anywhere in the file. By using the electric keyboard, new cards are quickly coded by any desired classification—by name, by number, by class of information, or by specific fact. *Acme Visible Records, Inc., Dept. H24, Crozet, Va.*

Portable air conditioner (24F-8)
Manufacturer's description: These portable air conditioners, which roll from room to room and can be adjusted to fit windows of varying heights, eliminate the need for

a sound foundation for

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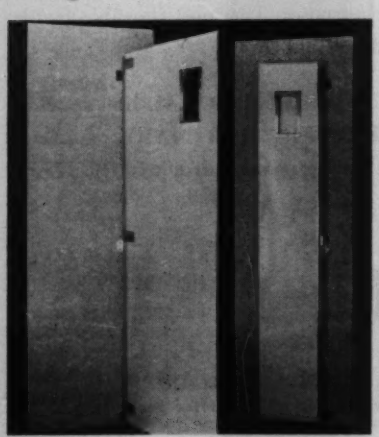
a cooling unit in every hospital room. The unit consists of a metal cart and an air conditioner, secured to the carriage for easy positioning by means of an adjusting handle. A sliding carriage supports the unit into the window opening. The air conditioners can be used in sash windows 30⅝ in. to 40 in., with sill heights varying from 24 in. to 37 in. *General Electric Corp., Room Air Conditioner Dept. H24, Louisville, Ky.*

Disposable syringe (24F-9)

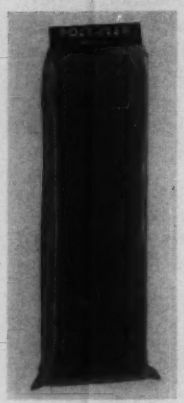
Manufacturer's description: This item precludes the necessity of collecting, cleaning, sharpening, sterilizing and distributing reusable hypodermic needles. The plastic syringe has a 2½-cc. capacity with a barrel hot-stamp printed to give accurate, easy-to-read graduations both in tenths of a cc and in minims. *Roehr Products Co., Inc., Dept. H24, Deland, Fla.*

Folding shield (24F-10)

Manufacturer's description: To aid in eliminating the dangers of secondary x-ray radiation, this unit is available in a wide range of colors and folds against the wall to conserve floor space. A 1/16 in. layer of lead between two washable, plastic-coated panels and a lead glass window placed at a convenient height are the protective factors incorporated in this shield. Three hinges are used to secure the folding shield to the wall and sizes are 24 in. x 6 ft. and 32 in. x 6 ft. *Marsh Wall Products, Inc., Dept. H24, Dover, Ohio.*



Traction bandage (24F-11)



Manufacturer's description: Recommended for use in a traction strip without an adhesive coating, this traction bandage requires very little pressure to prevent slippage and is tinted yellow for identification. Available in sizes of 2 x 26 in., 2½ x 32 in., 3 x 42 in. and 3 x 60 in. *Zimmer Mfg. Co., Dept. H24, Warsaw, Ind.*

Portable serving cart (24F-12)

Manufacturer's description: Capable of maintaining proper food temperatures—both hot and cold—for several hours, this serving cart can accommodate standard steam table pans, covers and large 14 x 18 in. trays. The insulated, stainless steel cart also permits the stacking of units on top of one another, and the four carrying handles assist in making the unit completely mobile. *Lincoln Mfg. Co., Inc., Dept. H24, 3230 S. Calhoun St., Ft. Wayne, Ind.*

X-ray unit (24F-13)

Manufacturer's description: This unit features an x-ray tube and film carrier situated at either end of an adjustable pivot arm making it possible to take x-rays of any part of the body from all angles. The patient is supported by a mobile stretcher which permits x-rays to pass through it and reach the film on the other side. *Westinghouse Electric Corp., Dept. H24, 40 Wall St., New York 5.*

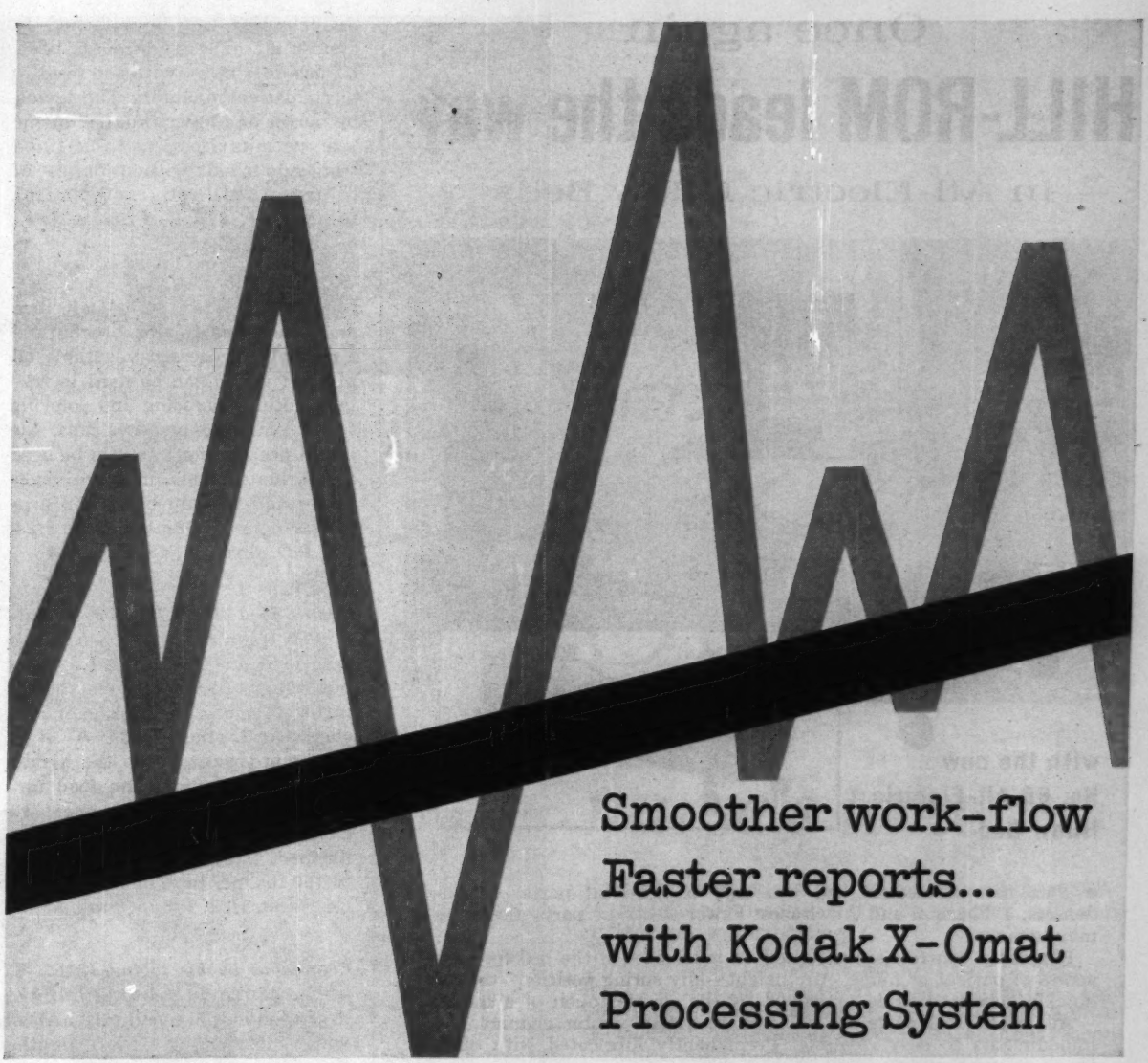
Blood loss measurement (24F-14)

Manufacturer's description: Based on the principle of the electrical conductivity of the blood, this instrument provides rapid, direct reading of blood loss, totals blood loss from all sources and provides two separate range scales for pediatric and adult use. It is designed for operating rooms and features a construction which permits easy cleaning and proper sanitation. *Critical Instruments Div., Industrial Instruments, Inc., Dept. H24, 89 Commerce Rd., Cedar Grove, Essex Co., N.J.*

product literature

SEE COUPON, PAGE 84

Tilting device for hospital beds (24FL-1)—Relating to postsurgical care, the device illustrated in



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● This new all-electric bed has only 5 electrical parts—2 condensers, 1 Thermal and 2 switches. Fewer electrical parts mean less maintenance.

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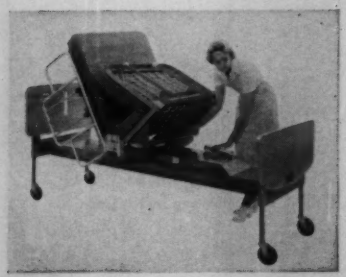
Large 5″ casters (standard equipment) make the bed easy to move, yet in low position the top of the spring is only 17″ from the floor.

All required spring positions can be had on this "fresh, new look" Hill-Rom bed. Illustrated brochure sent on request.



The entire spring and mattress assembly folds into one compact, upright position for quick, easy, more complete cleaning. There are no obstructions such as sharp edges or racks to impede cleaning. All exposed metal parts of foot end and inner legs are covered with stainless steel—no paint to chip off. The edges of all end panels are protected with extruded anodized aluminum trim.

The No. 68 Hill-Rom All-Electric Hilow Bed is listed by Underwriters' Laboratories, Inc., re-examination service, for use with oxygen administering equipment.

HILL-ROM COMPANY, INC. · BATESVILLE, INDIANA

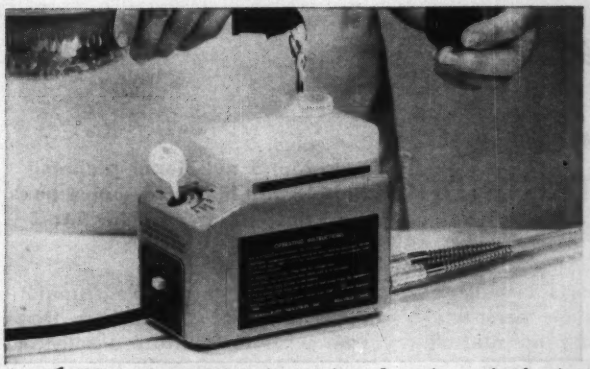
this circular can be attached to almost all existing hospital beds. Its use does away with the need to turn a patient manually. The device, by means of a lever situated on one side, permits a patient to be tilted from side to side without danger of injury. *Adco Products Mfg. Co., Dept. H24, 318 E. Colfax Ave., South Bend 22, Ind.*

Food preparer (24FL-2)—Described and illustrated in this brochure is a specially processed vegetable oil product which can be used in frying, baking, flavoring and coloring food. Available in 5-qt. cans, the liquid preparation can also be used to marinate meats, improve vegetables and in soup bases and gravies. *Procter & Gamble, Dept. H24, CP, P.O. Box 296, Cincinnati 1.*

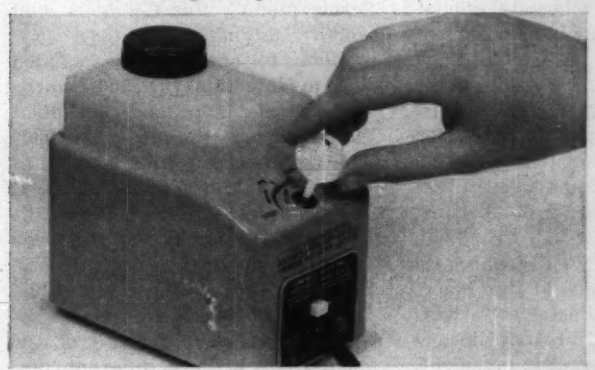
Electric food dicer (24FL-3)—Made of only four parts, the food dicer described in this brochure dices potatoes, onions, apples, beets, turnips, celery, eggs, cucumbers, cheese and other foods. A slight downward pressure on the handle automatically slides the food forward into the cutting frames; the pusher plate disengages itself when finished. The machine will dice up to 100 lbs. per hr. *The Hobart Mfg. Co., Dept. H24, Troy, Ohio.*

Continuous bubble tubing (24FL-4)—The continuous bubble tubing described in this circular is made of water-clear tubing in 50-ft. lengths. Should clot or stop-up occur, the transparency permits easy location so that any obstruction can be worked out. No separate tube fittings or rigid connectors are needed, and the tubing will fit suction machine fittings or wall suction units. *A. S. Aloe Co., Dept. H24, 1831 Olive St., St. Louis 3.*

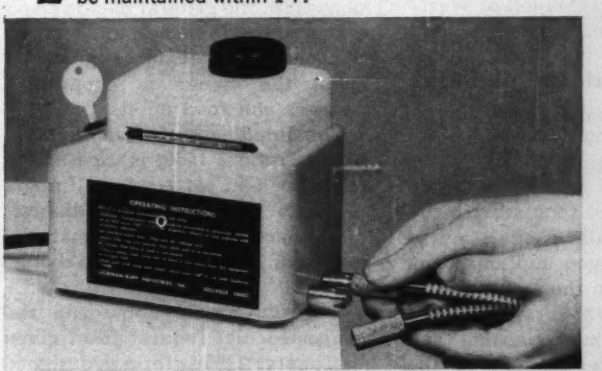
Sterilizer control system (24FL-5)—The sterilizer control system described in this booklet features a sterilizing cycle that can be run from start to finish in 15 min. Application of a vacuum at the start of the cycle eliminates air from all parts of the chamber load before steam is admitted. *Wilmot Castle Co., Dept. H24, 1777 E. Henrietta Rd., Rochester 2, N.Y.*



1 Fill the Control Unit; it contains a 3-week supply of water —no refilling during use.



2 Set the Control Unit for the desired temperature—it will be maintained within 1°F.



3 Connect the flow tubes to permit circulation of the water through the K-pad.

4 Apply the K-pad to the required body area (a dampened compress provides moist heat).

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DOCTORS, PATIENTS AND HEALTH INSURANCE. Herman M. Somers and Anne R. Somers. Brookings Institution, 1775 Massachusetts Ave., N.W., Washington 6, D.C., 1961. 576 pp. $7.50.

This Brookings Institution publication is a definitive study of the organization and financing of medical care in the United States. Some of the adjectives that are applicable to this book are: well-documented, readable, objective, provocative. The authors are social scientists and college professors who have served as advisers to John F. Kennedy as well as to the American Medical Association.

Throughout the book, the emphasis is on the inevitability of *change* in medical care organization and financing—change resulting primarily from continual advances in medical science and technology rather than from political or ideological forces.

The book traces the technological revolution in medicine which has caused the hospital to become "the controversial center of the medical world". The authors find the conclusion "inescapable that, strictly on the basis of professional evaluation, the more highly organized forms of medical care—especially hospital and group practices—are conducive to higher quality care".

The authors document changes in the "medical market place" resulting from the increased effectiveness of medical care and from the increased consumer demand that followed. Special attention is given to the emergence of the "ubiquitous third party", the growing importance of employee benefit programs, the problems of various forms of private health insurance and the need for cost controls.

One of the most brilliant sections of the book contains an analysis of the changing doctor-patient relationship and an outline of the characteristics of an emerging new kind of relationship based upon institutional supports.

This book provides perspective that should help any hospital official to understand the basic forces which are shaping the future of his hospital. After a hospital official has digested this book, he will have fewer surprises in his dealings with the medical profession, third parties and government officials. Also, he will probably be better equipped to exert a constructive influence in adapting his institution to what the Somers call "the new imperatives".

Every hospital should purchase *at least* three copies of this book: one for the administrator's shelf, one for the medical staff library and one for the hospital president. —ROBERT M. SIGMOND, *executive director, Hospital Council of Western Pennsylvania, Pittsburgh.*

Sound nutritional planning

DIET AND MENU GUIDE. American Hospital Association. Chicago, the Association, 1961. 36 pp. $2.50.

The new *Diet and Menu Guide* is designed to aid food service supervisors in small hospitals, nursing homes for aged and small institutions to plan the amounts and kinds of food which will provide nutritionally sound meals. The *Guide* should be brought to the attention of administrators, because, as the authors state, "Good institutional food service requires more than a professionally competent staff. It requires understanding on the part of administration".

Shared dietitians, part-time dietitians and consulting dietitians will find this guide helpful in implementing the training and heightening the competence of nonprofessional personnel.

Food service supervisors will find suggestions for planning daily meals. These, given in step-by-step fashion, range from a description of food groups to samples of menu patterns and meals. To stimulate the interest of and to help those who wish to institute a selective menu, or to modernize the process of menu planning by setting up a "cycle menu", this *Guide* is well worth studying.

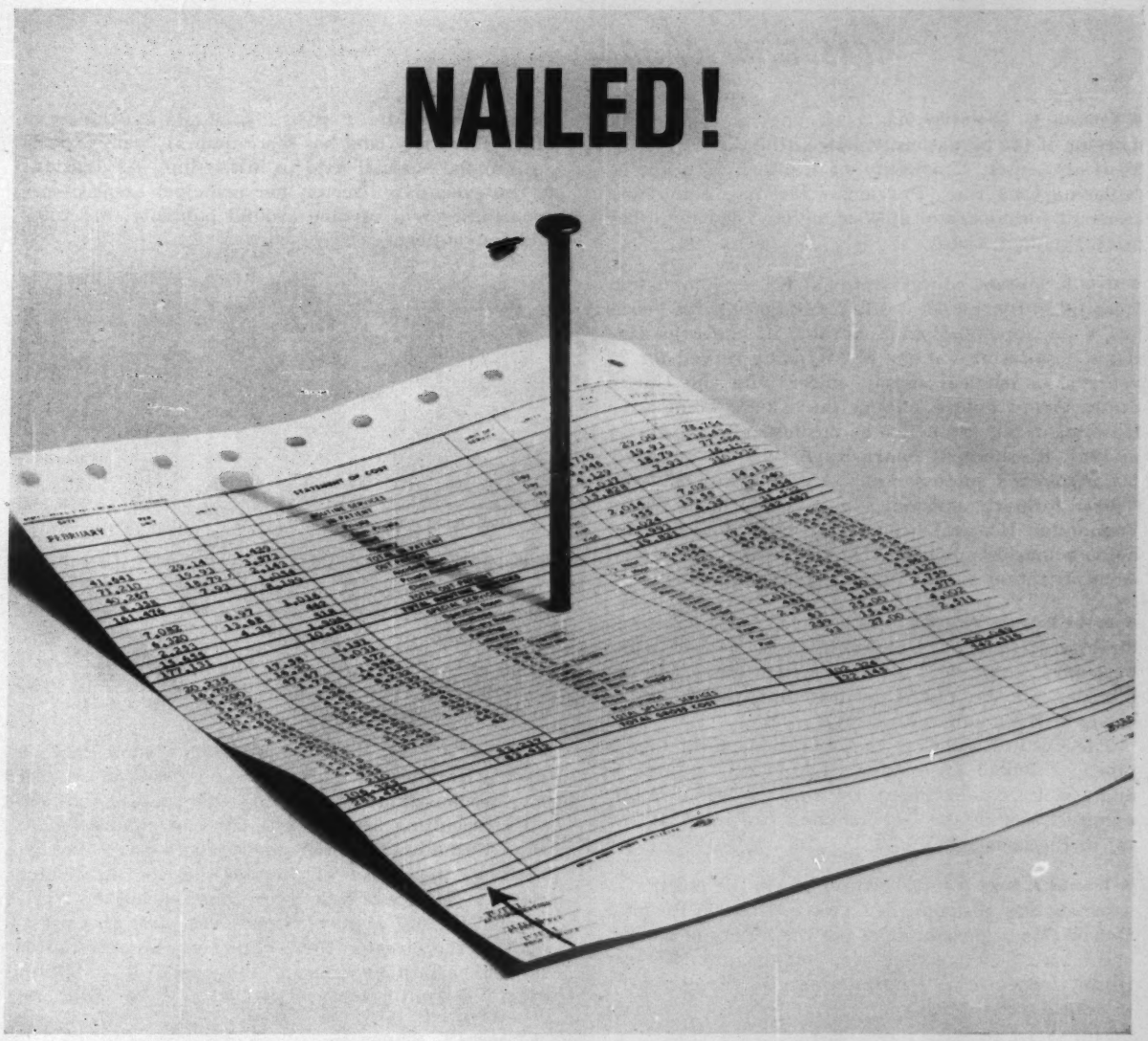
Menus for one week are included with modifications for 1500-calorie, 1000-calorie, soft and low-fiber, 500-milligram sodium and 1000-milligram sodium diets, as well as for diets for pregnant, lactating and adolescent patients. In addition, general menus for one week are given showing modifications in planning 1200, 1500, 1800, 2200, 2600 and 3000-calorie diabetic diets. A distinctive feature of the menu plans is that a different color print is used to make the variations from the general menus stand out clearly. Sufficient information on food equivalents is given to adapt the menus to geographic customs and food habits.

The *Handbook of Diet Therapy*, Third Edition, 1959, is used as the reference and pattern for all menu plans in this *Guide*. All diabetic menus are based on the material in "Meal Planning With Exchange Lists".

Physicians will appreciate the suggested diet request form given in Chapter 7. This form is designed to assist physicians to order diets, both quantitatively and qualitatively, and to aid the food service department to carry out physicians' orders accurately and efficiently.

The Joint Committee is to be commended for its painstaking effort to provide a very practical, useful guide, which will assist food service personnel and administrators to see institutional food service in its "proper perspective, with the patient as the prime reason for its existence".—MYRTLE VAN HORNE, *coordinator, Hospital Food Service Supervisors Course, Michigan State University, East Lansing.*

(Continued on page 103)



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personnel changes

● **Kenneth C. Abernethy** has been appointed assistant director of the outpatient clinics at the San Francisco Medical Center, University of California Hospitals, replacing Carl Ross. Previously Mr. Abernethy was assistant administrator at Washington-Township Hospital, Fremont, Calif.

● **Elvin D. Arnoldy,** administrator at Kaiser Foundation Hospital in Richmond, Calif., for the past three years, has been appointed administrator of the organization's hospital at Vallejo. Mr. Arnoldy served for 21 years as a medical supply officer with the United States Army before joining the Kaiser Foundation Hospital in San Francisco as business office manager in 1957. He succeeds Henry Kaye, who has resigned. Mr. Arnoldy's successor at Richmond will be **Daniel Fletcher,** formerly assistant administrator at the Kaiser Foundation Hospital in Oakland, Calif. Mr. Fletcher holds a master's degree from the school of Hospital Administration at the University of California.

● **David Babnew Jr., M.D.,** has recently been appointed director of the Board of Public Assistance of Hillsborough County, Fla., an organization created to administer all the public medical and social service needs of the community.

The position involves the operation of three hospitals, a school of nursing, several nursing homes and a welfare department. Dr. Babnew was formerly administrator of the Northampton Accomack Hospital in Nassawadox, Va.

● **Thomas J. Boyd Jr.** has been named to the position of associate administrator of Lakeside General Hospital, Detroit. He is a graduate of the University of Detroit, and for the past five years was employed by Michigan Hospital Service as a hospital service representative in Southeastern Michigan.

● **Bruce J. Carter,** formerly administrative assistant of University Hospital in Columbus, Ohio, joined the Columbus Hospital Federation staff on September 1 in the newly created position of director of technical Hospital Services. Mr. Carter has his master's degree from the graduate school of business administration, Cornell University, with concentration in the Sloan Institute of Hospital Administration.

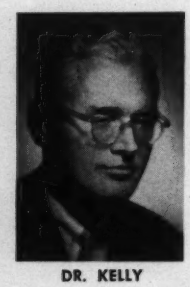
● **Laurier W. DeMers** has recently been appointed to the position of assistant director of the Board of Public Assistance, Hillsborough County, Fla., and administrator of the Hillsborough County Hospital. Mr. DeMers was formerly administrator of the Eastern Pennsylvania Psychiatric Institute in Philadelphia, and of the Fairhill Psychiatric Hospital in Cleveland. He is a graduate of the program in hospital administration at the University of Pittsburgh.

● **Daniel Fletcher** (see Arnoldy item).

● **Mrs. Elizabeth C. Ford** has been named assistant director of the Mississippi Hospital Association, effective September 11. Mrs. Ford is a graduate of Mississippi State University, and has more than 11 years experience in the hospital field in Mississippi. As assistant to the executive director, her principal areas of responsibility will revolve around publicity, institutes and conventions.

MRS. FORD

MR. JACOBS



DR. KELLY

● **Donald J. Jacobs,** who has been assistant director of the Chicago Hospital Council for the past two years, became the new administrator at Woodlawn Hospital, Chicago, in December. Prior to his position with CHC, Mr. Jacobs was assistant director at Watts Hospital, Durham, N.C. He succeeds Ernest L. Bliss at Woodlawn Hospital.

● **William A. Kelly, M.D.,** director of the Mount Vernon (N.Y.) Hospital for the past 12 years, retired October 1 to become a member of the senior staff of the hospital consulting firm of Anthony J. J. Rourke, M.D., New Rochelle, N.Y. For the past 10 years he has been on the board of directors of the Associated Hospital Service of New York, representing the Westchester County Medical Society. He was also president of the Greater New York Hospital Association in 1957 and a member of the board of governors from 1954 until this year.

● **Dwayne C. Shoemaker** has recently been appointed to the position of assistant director to the Board of Public Assistance, Hillsborough County, Fla., and administrator of the Clara Frye Memorial Hospital in Tampa. Mr. Shoemaker was formerly administrator of Carmi (Ill.) Township Hospital. He is a graduate of the University of Chicago, and holds a master's degree in hospital administration.

SISTER ANDRE

● **Sister M. Jean André** is the newly appointed administrator of St. John's Hospital, Cleveland. Sister Jean André has a master's degree in social service from the Catholic University of America, Washington, D.C. Her previous assignments, all in Cleveland, include posts at St. Ann Hospital, St. Vincent Charity Hospital and St. Augustine Academy. For the past nine years she had directed the social service program at Parmadale Children's Village.

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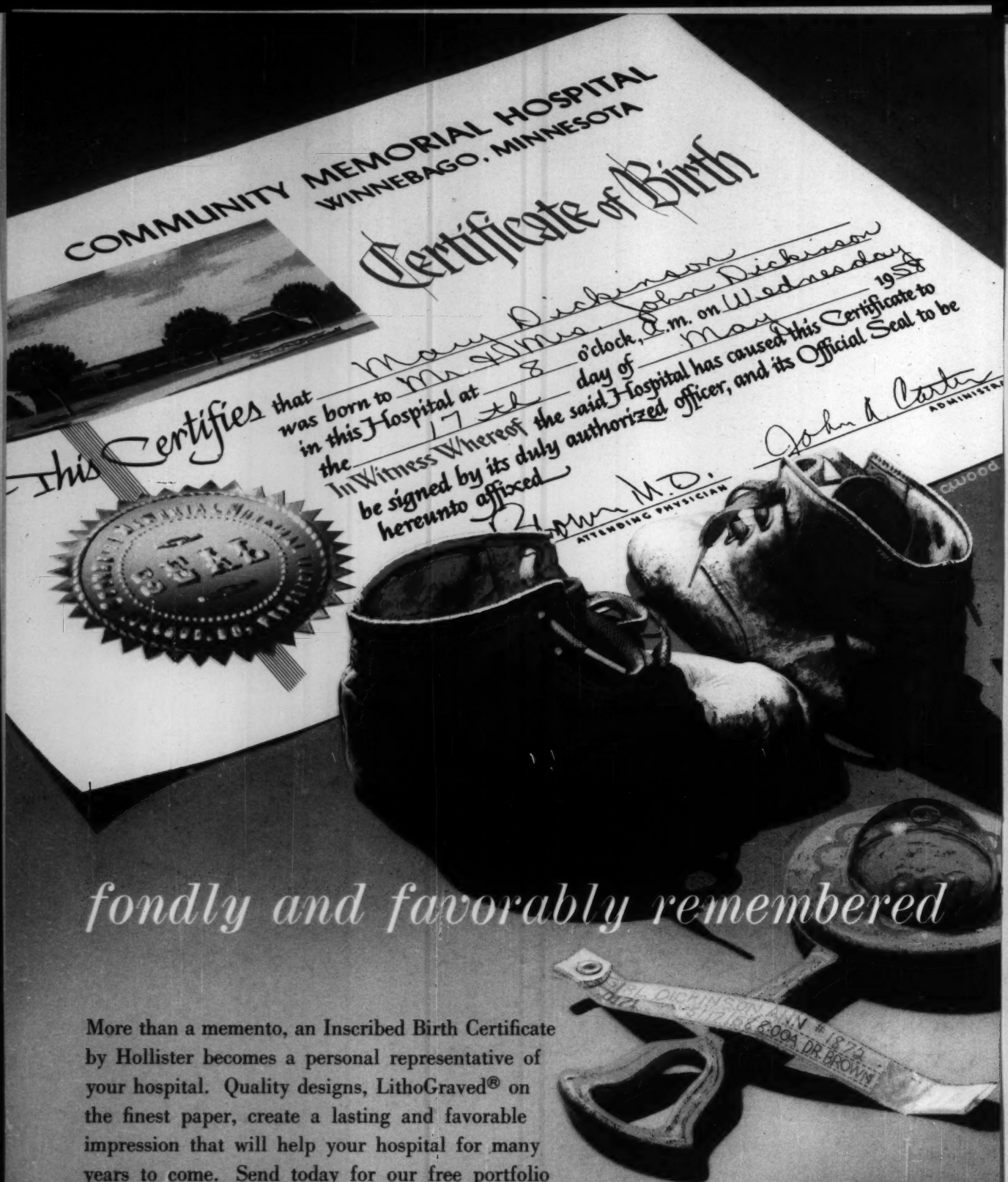
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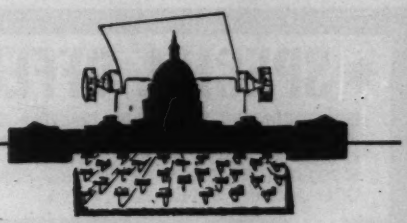


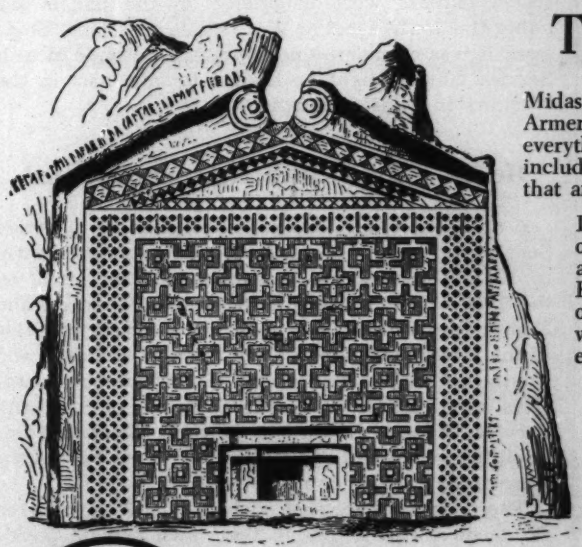
Civil Defense Emergency Hospitals Provided

The federal government has purchased 1930 emergency hospitals to be used, if necessary, in civil defense. As of Dec. 1, 1961, 1907 of these had been allocated among the 50 states, the District of Columbia, Puerto Rico and the Virgin Islands. The balance are to be allocated shortly. The largest number (169) were allotted to Pennsylvania, the second largest number (157) went to California. Delaware and the District of Columbia had one each.

The emergency hospitals program, as part of the Civil Defense Emergency Medical Stockpile, is the responsibility of the U.S. Public Health Service. An early December announcement from Luther L. Terry, M.D., PHS Surgeon General, discussed the hospitals in detail. He said: "The largest single item in the $260 million National Emergency Medical Stockpile inventory is the Civil Defense Emergency Hospital (CDEH). This is a functional, 200-bed, general hospital stored in boxes, which can be set up quickly in an existing structure, such as a school or church building or community center, to serve independently or in conjunction with a regular hospital."

Dr. Terry stated that the emergency hospitals cost from $21,000 to $26,000 each. "The majority," he said, "are positioned in carefully selected, dispersed, strategic locations throughout the United States. They can be expected to replace a significant portion of the regular hospitals which could be destroyed or made unusable by a mass attack upon this country."

The PHS report on the CDEH pointed out that some emergency hospitals, designed for training, are available from states to permit responsible personnel to obtain practice in setting up and operating these hospitals. Civil Defense Medical Stockpile Depots have also held public showings of the installations with the purpose of teaching the general public what drugs, medical supplies and equipment are available for use in a national emergency. Included is the new Medical Self-Help Training Program to teach families how to survive a national emergency and meet



Tomb of Midas, King of Phrygia, who turned to gold everything he touched.

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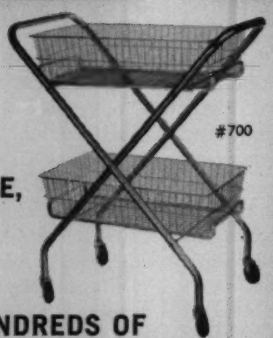

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Drug Bill Hearings Resume

December 6, 7, 8 and 9 were the scheduled dates for the series of hearings on pending drug legislation with testimony from representatives of the pharmaceutical industry. The subcommittee holding the hearings is the Senate Antitrust and Monopoly Legislation group of which Sen. Estes Kefauver (D-Tenn.) is chairman. He is also the author of the pending bill (S. 1552) around which the hearings are centered. Other sessions are planned before the subcommittee reports out a bill, possibly before the 1962 Congress convenes on January 10. No set dates were available as of early December.

Another planned series of Congressional sessions may have an effect in the health field. These will be panel meetings—not public hearings—by a special advisory group of the House Education and Labor Committee. The special group, of which Rep. John Bredemas (D-Ind.) is chairman, was set up, in the words of a committee spokesman, "to study higher education across the board". It will make recommendations to the parent committee in January, but will not actually draft legislation. It is possible that the study of higher education may involve undergraduate premedical school training. The first of the panel meetings is set for December 15 and 16 in South Bend, Ind. The second is scheduled to take place in Washington on December 18, 19 and 20. These are expected to be closed sessions. No medical or medical school experts were originally on the panels for either the South Bend or Washington meetings. However, it was considered possible that a Public Health Service official might be invited to take part in the Washington panel discussions.

Health Aid for Draft Rejectees Planned

A new plan to aid young men rejected by Selective Service for health reasons is scheduled to begin early in 1962. The result of a recommendation made by the 1960 White House Conference on Children and Youth, it was developed by a special subcommittee of the Interdepartmental Committee on Children and Youth. Subcommittee members included representatives of the Selective Service System, Public Health Service, Office of Education, Office of Vocational Rehabilitation, Bureau of Employment Security and the Department of the Army.

The plan provides that such men will be referred for medical care either to their own private physicians or to appropriate community health facilities. Participation is voluntary on the part of the rejectees. The referrals will be made through the stationing of state or local health department personnel at Armed Forces Examining Stations. Under the original plan, the cost of providing the needed health services will be borne by existing methods—personal payment by the individual, the use of health insurance programs, or the use of community clinics or teaching hospitals.

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Steps for Raising Hospital Standards Told at New York Committee Hearings

Proprietary hospitals licensed by the Department of Hospitals in the City of New York have been advised that if they have not become accredited by the Joint Commission on Accreditation of Hospitals by Jan. 1, 1965, they will not be given their annual license.

This new policy—which affects two-thirds of all such hospitals— is one of five definite steps toward the establishment of standards enumerated by Ray E. Trussell, M.D., commissioner of hospitals of the City of New York, in his statement during the final hearing of the Joint Legislative Committee on Health Insurance Plans of the State of New York in New York City on November 17. The committee has been studying the operation of Blue Cross and Blue Shield in New York.

NAMES THREE MAJOR PROBLEMS

Dr. Trussell, who directed the study of Blue Cross made for the state superintendent of insurance and the state commissioner of health by the Columbia University School of Public Health and Administrative Medicine, said that the three major problems contributing to unnecessary or rising costs in health plans are: (1) unnecessary care; (2) prolonged time in the hospital or unnecessary hospitalization for a genuine illness, and (3) the construction—frequently by profit-making concerns —of more hospital facilities than are needed.

Dr. Trussell said that in a report on the quality of medical care, to be submitted to the state government soon, there are "some unbelievable descriptions of unnecessary surgery and, as would be suspected, the problem is concentrated in hospitals which are not accredited . . ."

Presenting evidence of unnecessary hospital building, Dr. Trussell said, "One cannot overemphasize the gravity of the problem facing a Blue Cross Plan when more hospitals are constructed than are needed." He said hospital beds, whether they are occupied or not, are expensive, and their costs become a part of the hospital's average yearly costs. Too many empty beds, he said, encourage unnecessary hospitalization and may be a threat to the health and welfare of the public.

According to Dr. Trussell, other steps being taken toward the establishment of standards for health facilities in New York, are as follows:

- Voluntary hospitals have been advised by the Department of Hospitals that if they are not accredited by the Joint Commission by Jan. 1, 1963, city charge patients will not be certified to the controller for payment for care in such institutions.
- The "grandfather" clause, under which certain proprietary nursing homes were originally licensed, has been rescinded. The owners of many such facilities have appealed and are being given the right of hearings as part of an orderly procedure which will bring the physical facilities of every proprietary nursing home up to acceptable standards or force its closing.
- A hospital consultant and a consulting architect are analyzing the present proprietary hospital code and revisions will be promulgated by the Board of Hospitals next spring.
- A consultant has been assigned and an advisory committee is being formed to review and recommend improvements in the code provisions governing care of patients in proprietary nursing homes.

DR. TRUSSELL

MR. COLMAN

Dr. Trussell also discussed what the city government is doing in order to meet the major problems contributing to unnecessary and rising costs. Among these was the intention of the Department of Hospitals to participate in a new regional council which will take the place of the Hospital Council of Greater New York.

J. Douglas Colman, president of the Associated Hospital Service of New York (Blue Cross), also testifying at the hearing, said that "social and economic pressures of the past few years have made all concerned more than ever aware of the urgency of the cost and quality problems which face hospitals and the public".

'PROCEDURES' GIVEN PRIORITY

Outlining "what needs to be done", Mr. Colman said that first priority goes to the establishment of procedures to assure the proper type and size of hospital, in the right place, in time to serve the population which will need it. He rested the responsibility for this on the new Regional Hospital Review and Planning Council.

"Second priority," said Mr. Colman, "goes to the need for improved machinery to maintain quality of hospital care." He said Blue Cross, with its information, manpower and equipment, can and will do more than it has to help hospitals function effectively in this area.

Adequate payment to hospitals for the care of the indigent and increased prepayment benefits for ambulatory patients were the other suggestions on which Mr. Colman urged "prompt action by all those concerned".

The committee previously held hearings in Jamestown, Watertown, Albany, Buffalo, Rochester, Syracuse, Utica and Mineola, L.I. ■

Selective Service Issues Statements On Doctor Draft

A bulletin issued in November by the Selective Service System requests local draft boards to continue to give serious consideration to the deferment of a registrant who is a physician so that he may complete his internship.

Operations Bulletin No. 177 furnishes information regarding the processing of registrants who are physicians, dentists or veterinarians. It points out that a physician should not be placed in Class II-A for the purpose of completing a residency unless: (1) in the opinion of the local board his services

are essential to the operation of the hospital, or (2) he is one who has been certified for essential training by the Public Health Service on Request for Deferment and Hospital Agreement.

In a section devoted to Public Health Service Residency Programs, Bulletin No. 177 states that to insure that the Public Health Service will continue to receive reserve medical officers who have had residency training in specialized fields, the director of Selective Service and the Public Health Service (PHS) have agreed to continue the Public Health Service Commissioned Officer Residency Program. This program permits a limited number of registrants who are, or will become, commissioned medical reserve officers to complete residency training prior to being called to active duty. To implement this agreement, the director recommends the deferment of registrants who may be selected by the PHS for essential residency training under the program.

REGISTRANTS CERTIFIED

Each selected registrant will be certified to the Selective Service System on Request for Deferment and Hospital Agreement, and the director will forward this form to the registrant's local board through the appropriate state director of Selective Service.

The bulletin explains that the armed forces will continue to permit some reserve officers commissioned as physicians to complete residency training prior to entering on active duty. The Record of Military Status of Registrants submitted to the local board by such a registrant's military unit certifying that he is serving satisfactorily as a member of the Ready Reserve shall qualify him for consideration for classification in Class I-D under the provisions of section 1622.13 (1) of the regulations.

In a memorandum to hospitals, the National Advisory Committee to the Selective Service System states that the recent calls for physicians and other health personnel have been completed to the point where the individuals involved have been informed of their imminent induction. These calls, it notes, have been made on the basis of age in accordance with rules and regulations of the Selective Service System.

"It is obvious," the statement continues, "that since this first call

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has been made for those who have completed their internships and still have not reached their 28th birthday, the vast majority called would be those who are serving their first year of residency. It is granted that it is unfortunate that they should be disturbed at this point in their scientific training careers; however, some of them, at least, had opportunities to apply for commissions in the Armed Forces Residency Program (Berry Plan). On the other hand, there are some who applied for commissions and were not able to obtain them because no vacancies were available in the service of their choice. Consideration has to be given on the other side to the fact that many of these individuals did not do either, but simply elected to take the chance of not being called while in training."

HOSPITALS ADVISED

The memorandum goes on to emphasize that the National Advisory Committee has advised that hospitals should concern themselves with the potential military liability of those being given appointments for further training. The committee points out that if many of those who have received their orders for induction because they have not reached their 28th birthday are not called because they are essential to their hospitals, the Selective Service System will have to call on the group who have not reached their 29th birthday, and so forth. The committee recommends that every hospital should "adjust as well as possible to the loss of some of its residents, and should realize that it is preferable to lose a first-year resident, at the present time, than a third-year resident, two years from now".

The memorandum concludes: "The committee is, of course, aware of the fact that this call-up is not evenly distributed and cannot be, since it is on an age basis. If any situations develop in which an undue number of residents are ordered for induction from any one hospital or in a larger hospital, from any one service, seriously impairing its efficiency, the state chairman should be informed. If necessary he can refer the problem to the national committee for decision. The committee will make every effort to fulfill the obligation assigned to it by Congress to see to it that the withdrawal of health personnel to supply the military does not adversely affect the civilian medical care." ■

Government's Role in Health Care Debated at Washington, D.C., Meeting

A lively debate on the government's role in health care for the aged opened the three-day session of the Maryland-District of Columbia-Delaware Hospital Association's 21st annual meeting in Washington, D.C., Nov. 8-10.

Protagonist for the government in the debate which saw both tempers and voices rise was Wilbur J. Cohen, Assistant Secretary, Department of Health, Education, and Welfare. Opposing arguments were presented by J. Douglas Colman, president of the Associated Hospital Services of New York, and Donald Stubbs, M.D., president of the District of Columbia Medical Society and former chairman of the board of the National Association of Blue Shield Plans. Jack Masur, M.D., president of the American Hospital Association, moderated the panel.

Planning tomorrow's health care facilities was the subject of another general session, moderated by Edwin L. Crosby, M.D., director of the American Hospital Association. Participants were Anthony J. J. Rourke, M.D., hospital consultant; James J. Souder, of the Architectural Firm of York and Sawyer, and John D. Thompson, director of Yale University's program in hospital administration.

A food scientist, William J. Darby, M.D., Vanderbilt University School of Medicine, struck at "sensational writers, cult members and faddists" during a section meeting, saying that they scare the public into believing that food additives are a danger to health.

The medical aspects of manned space flight was the subject of Maj. Gen. Richard L. Bohannon, deputy surgeon general of the Air Force, in an address before a federal hospital luncheon.

Lad F. Grapski, director of Baltimore's University Hospital, moderated a general session devoted to a review of nursing. Panelists were Albert W. Snoke, M.D., director of Grace-New Haven Community Hospital, New Haven, Conn.; Miss Edna S. Lepper, assistant director of nursing, Massachusetts General Hospital, Boston, and Miss Olga Benderoff, director of nursing services at University Hospitals of Cleveland.

Maurice W. J. Abraham, director of Kent General Hospital, Dover, Del., is the new president of the association. ■

Federal Trade Commissioner Dismisses Antitrust Charges

A Federal Trade Commissioner recommended last month that antitrust charges against several large drug companies be dismissed.

The commissioner, Robert L. Piper, has been taking testimony and studying the evidence for the past two years. His decision is subject to appeal and review by the full commission.

The companies involved are American Cyanamid Co., Bristol-Myers Co. and its subsidiary, Bristol Laboratories, Inc., Chas. Pfizer and Co., Olin Mathieson Chemical Corp. and the Upjohn Co.

According to Mr. Piper, the record contained "isolated" evidence that "standing alone and without explanation, might cause suspicion or speculation of conspiracy". He noted, however, that in context "it is concluded and found that the respondents have not engaged in any of the violations alleged in the complaint".

The complaint was filed against these companies by the commission on Aug. 2, 1958, following a two-year investigation. It alleged that the companies had for years "fixed and maintained arbitrary artificial, noncompetitive and rigged prices" on three widely used antibiotics. The principal drugs involved in the case are chlortetracycline, oxytetracycline and tetracycline. The commission's investigations found that in 1956 tetracycline was the leading antibiotic in dollar volume sales, with penicillin second.

The complaint included the charges that:

1. Pfizer had "made false, misleading and incorrect statements" to the Patent Office to get a patent on tetracycline. Thereafter, it alleged, Pfizer illegally licensed other companies to use the falsely obtained patent.
2. The six companies had artifi-

cially rigged market prices of the drugs, denying competitors "a reasonable opportunity to compete".

Referring to the price-fixing section of the complaint, Mr. Piper said that there was substantial price competition in the hospital and federal government markets for the antibiotic drugs involved in the case. The examiner found the prices to retailers, however, were substantially uniform, but he said that these were set in order to meet the competition of entrenched marketers and that to reduce prices would have been self-defeating because competitors would have matched any such move.

The record shows a substantial shift of shares of the tetracycline market from Cyanamid and Pfizer to Bristol, Squibb (Olin Mathieson) and Upjohn, and this, according to Mr. Piper, along with evidence of price competition in the hospital markets "leads logically to an inference that no price-fixing conspiracy existed".

A separate antitrust suit filed by the Justice Department in New York against three of the companies also charges price-fixing on antibiotics. It was not clear how the decision of the Federal Trade Commission might affect this antitrust suit. ■

Dr. Crosby Announces AHA Staff Appointment

Edwin L. Crosby, M.D., director of the American Hospital Association, has announced the transfer of Arthur H. Bernstein, staff attorney, to the Washington Service Bureau. He will assume his new duties in Washington, D.C., on Jan. 10, 1962.

Selma Levine, staff attorney in the Washington Service Bureau, resigned Dec. 1, 1961, to return to private practice. ■

Nonproprietary Drug Names Listed In AMA Journal

A listing of new nonproprietary drug names began appearing in the November 18 issue of the *Journal of the American Medical Association.*

The AMA, through its Council on Drugs, and the United States Pharmacopeia have recently joined forces in a program of selection of nonproprietary names for single entity drugs—those drugs with a single active ingredient or extracts from a single source.

"The purpose of publishing such a list at this time," according to a JAMA editorial, "is twofold: (1) to promptly provide medical educators and physicians with basic and authoritative information on new drugs, and (2) to provide editors of medical journals with a convenient source of formally adopted, nonproprietary names and to encourage their use in these publications." ■

Details of New MAA Plan Discussed At HAP Meetings

In preparation for the start of a Medical Assistance for the Aged (MAA) program in Pennsylvania on Jan. 1, 1962, the Hospital Association of Pennsylvania, at the request of the State Department of Public Welfare, held six regional meetings during the month of November.

All hospitals in the commonwealth, including osteopathic and proprietary institutions, were invited to the sessions, and the hospital association urged every hospital that treats persons 65 or over to send representatives.

Among the key figures attending the meetings was William Tollen,

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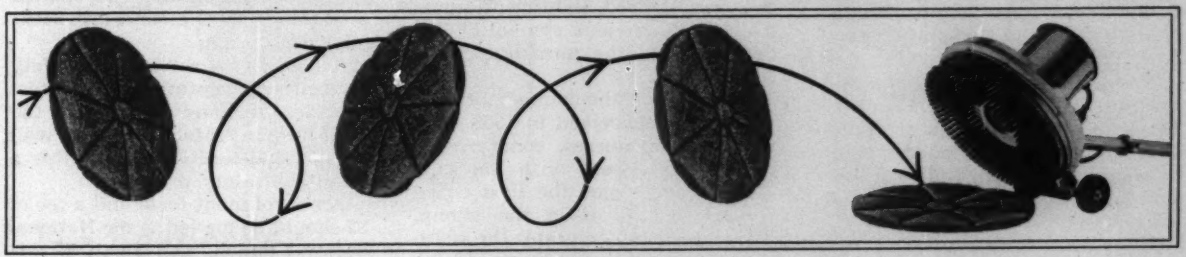

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Public Assistance Commissioner, who explained hospital responsibility in relation to the over-all responsibility for the care of the aged, methods of establishing eligibility, how to file claims and other details of the new MAA program. Others attending include the executive directors of County Boards of Assistance.

According to the hospital association, the Department of Public Welfare urged these persons to attend "in an effort to establish closer relationships between its field people and hospital officials with whom it will be now coming into greater contact".

The first meeting, held November 8 in Meadville, Pa., drew 153 persons, including representatives of 34 out of the 41 hospitals in that region. ■

Good Response Reported To Aged Plan In Syracuse

At the three-quarter mark of the current enrollment period for senior citizens, Blue Cross and Blue Shield in Syracuse, N.Y., report 4709 requests for details, and 841 signed applications.

"We did not expect this year's response to exceed last year's initial offer of this type of protection which resulted in 3390 new subscribers out of approximately 5000 inquiries. However, with one more week left to the campaign, it appears this year's return may exceed last year's," William VanLengen, vice president in charge of sales for Blue Cross of Central New York, said.

Enrollment in the program was open during the month of November to persons 65 years of age or over, in reasonably good health, who are retired, unemployed, self-employed or unable to join through a group.

Benefits include 70 days of hospital care after a $50 deductible during each period of disability, and a paid-in-full guarantee for most contracted medical-surgical benefits for subscribers with a total yearly income of less than $4000.

Applications received and approved by the Plans by Dec. 1, 1961, will be made effective Jan. 1, 1962. The coverages are noncancellable except for nonpayment of subscription fees.

Currently the local nonprofit hospitalization plan provides protection to 34,745 senior citizens. In addition to the 3390 who enrolled during the special enrollment last year this figure includes subscribers 65 or over who are still working, or those no longer working but continuing their protection through a retirement program or as nongroup subscribers. ■

Four-Cent Nursing Stamp To Be Issued December 28

A new four-cent postage stamp honoring the nursing profession

will be issued in Washington, D.C., on December 28.

The stamp will feature a young woman, who has finished her probationary period, lighting the traditional candle as a symbol of her dedication to the nursing profession.

The idea for the commemorative stamp was conceived in 1958. Administrators, nurses, congressmen and others agreed with the suggestion, and urged the Post Office Department to issue the stamp. This year commemorates the 100th anniversary of the first nurse training school in the country, at Woman's Hospital, Philadelphia.

The stamps will go on sale in local post offices on December 29. ■

N.Y.'s Medically Needy Get One-Fourth Of State's Aid

More than one-fourth of all money spent for public assistance in New York state last year was for the medical care of the needy sick, the State Department of Social Welfare said recently.

Of a total public assistance expenditure of $343 million, $98 million or 28.5 per cent of the total went for medical care, a department report shows. Upstate, the medical percentage was 36.1, while in the city of New York it was 24.3. Part of this difference is due to the widespread availability of clinic care in New York City, where low-income families who require only this type of care receive it through the municipal hospital system, not public assistance.

The highest percentage of medical care—48.9 per cent or nearly half of all the assistance given—went to recipients in the adult programs of old-age assistance, aid to the disabled and assistance to the blind.

The report states that a large proportion of public assistance recipients were on the rolls because illness had depleted their resources or had reduced or ended their earning capacity. Average medical care expenditures of welfare cases far exceed those of the average family.

Of the $98 million in medical expenditures, hospitals in the state received $36 million; nursing homes and infirmaries received $45 million, and medical practitioners, drug stores and other suppliers of medical services received $17 million. ■

Hospital Safety Contest Enrollment Under Way

The National Safety Council is again conducting the Hospital Safety Contest as part of its Hospital Safety Program. The contest is endorsed by the American Hospital Association.

According to a National Safety Council representative, the contest provides a means of unifying the total hospital safety effort, as well as an opportunity to revitalize a hospital's safety program.

An enrollment form and a fee of $5 should be mailed to the National Safety Council, 425 North Michigan Ave., Chicago, 11. The deadline for submitting enrollment forms is Feb. 15, 1962. ■

Groups Elect Officers

Oklahoma Hospital Association: President, Benny Carlisle, administrator, Community Hospital-Clinic, Elk City; president-elect, Richard C. Luttrell, administrator, Norman Municipal Hospital, Norman; vice president, James D. Harvey, administrator, Hillcrest Medical Center, Tulsa; treasurer, Joe R. Baker, administrator, Enid General Hospital, Enid; secretary, John J. Ramsey, administrator, Jackson County Memorial Hospital, Altus.

(Continued from page 90)

Health literature source book

SOURCES FOR HOSPITAL ADMINISTRATORS—PUBLICATIONS AND FACILITIES SERVING THE HEALTH ADMINISTRATION FIELD. Paul Wasserman. Ithaca, N.Y., Graduate School of Business and Public Administration, Cornell University, 1961. 60 pp. $2.

Here is a welcome study which organizes and analyzes sources of the literature as well as describing certain health agencies in the field. Coverage seems comprehensive, arrangement is logical, annotations concise and accurate and an appendix gives addresses of all publications and organizations mentioned. However, one questions the inclusion of such standard references as medical dictionaries.

The stumbling block to more general usage is an index in which only form entries and names are given. A busy administrator will not find in this the vade mecum he may desire, but librarians and students in academic courses in hospital administration will find it helpful and informative.—BETH A. SIMPSON, *Librarian, Medical Field Service School, Fort Sam Houston, Texas.*

Hospital preview for tots

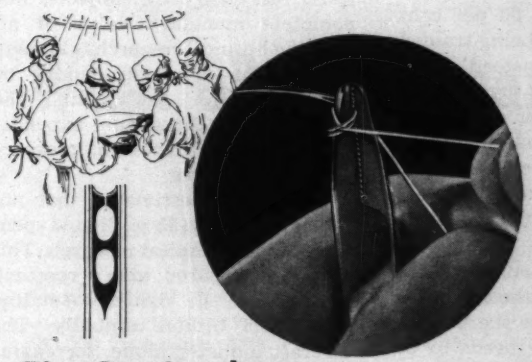
The film, *A New World for Peter,* is a very appealing and factual orientation film, which is narrated by a child. The film is designed to reduce the fear of the unknown, which attends a child's hospitalization, for the pediatric patient and his parents. In this respect, it has several applications.

If the film is shown to a child and his parents several days prior to planned admission to hospital, the interval between viewing it and entering the hospital will permit him to discuss his hospitalization with his parents. This talking out some of his apprehension with an adult whom he trusts will allay his fears. The parents, having seen the same film, should feel more secure in interpreting the situation to the child. They also should find some help from the film in allaying their fears about the child's hospitalization.

Although, in nearly all instances, children will be admitted to hospitals other than the one shown in the film, and although some techniques may vary from those shown in the film, this should not detract from its effect in helping children because it shows the basic philosophy of helpfulness and kindness of all hospital personnel.

Since hospital admissions are often of an emergency nature, which precludes the possibility of preadmission viewing of the film, it would be well for as many children as possible to see this.

Children are also often concerned about the hospitalization of another member of the family, or a beloved grandparent. Having seen the film, the child would be less apprehensive about his loved one.—LILLY D. HOEKSTRA, *administrator, St. Louis (Mo.) Children's Hospital.*



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Contemporary hospital pharmacy —its future development

(Continued from page 74)

macists have had the feeling that their advancement, if they show administrative competence, lies in the direction of hospital administration rather than hospital pharmacy. In consideration of the growing importance of drug and medical supply procurement, dispensing, supervision and administration, there should be plenty of opportunity to carve out a most satisfying career in hospital pharmacy as it is now developing. Recognition of this fact on the part of all concerned should go far in promoting the efficiency and value of this specialized service to the satisfaction of the hospital pharmacy practitioner as well as the hospital to which he dedicates his talents. ■

Must the patient pay for nursing education?

(Continued from page 55)

The questionnaire also showed the intention of many schools to continue to make future tuition increases, some of which will be sizable. There are still but eight schools that identified a separate charge for living expenses, but there were only three in 1959. It is in this particular that the most significant gains can be made toward eliminating the net cost imbalance. It is hard to understand why hospitals have been so slow to utilize this route out of their financial dilemma. Cost analysis has shown living costs to be approximately one-half of total costs, and, in "boarding school," certainly living expenses constitute half of total educational charges on the average. In conclusion, it appears that progress is being made toward equating nursing school income and outgo but at a much slower rate than the situation demands.

MORE NURSES NEEDED

Our apparent reluctance to move faster in achieving nursing school financial balance is based upon the fear that enrollment will be affected adversely. This is not disclosed from an analysis of the questionnaire. On the other hand, total enrollment and graduation statistics do show that we are not keeping pace with nursing needs for an expanding population. In 1957, total nursing school enrollment in all programs was in excess of 114,000, while NLN figures as of Oct. 15, 1960, showed enrollment to be 118,000, a mere 3.5 per cent increase. Population and need have expanded at a much faster rate so that critical shortages and dilution of essential nursing care will undoubtedly worsen. The New England picture is brighter, however. Enrollment is up 6 per cent and the admission rate 9 per cent, both as of Oct. 15, 1960. It remains to be seen, however, whether or not these increased rates can be carried through to graduation, as the number of nurses graduated as of Aug. 31, 1960, was almost identical with the number graduated in 1957.

On the supposition of higher cost to the student adversely influencing enrollment, it should be observed that while the number of diploma schools has decreased from 972 in 1957 to 908 in 1960, enrollment has remained level at 94,000. Consequently, 80 per cent of our nurses are now being trained in diploma schools instead of 83 per cent three years ago. However, there is a 3.5 per cent overall increase in the baccalaureate and associate degree programs, where the cost to the student is appreciably higher than in the diploma school.

In summary, a good start has been made in shifting the education financial burden from the patient to the student. There needs to be greater acceleration of this unmistakable trend if equity is soon to be served and if we are to reinforce our contention that a broader base of financial support is needed. The area of emphasis is clear: It is the matter of living costs, which represent one-half of the cost of the education, being provided. The problem must be met now in the diploma school, regardless of the philosophy to which individual hospitals subscribe regarding the optimum method of educating nurses in the future. It is not conceivable that alternate methods of education can either take its place or increase the nurse supply needed now or in the future to successfully cope with the growing needs of the nation. There are two alternatives to correct diploma school financial imbalance, both of which need to be employed: an increase in permitted service hours and an increase in cash income, from the students. ■

New horizons for hospital research

(Continued from page 41)

tions of government programs, trends in design and construction and trends in medical education and medical practice which affect future hospital planning. Although there may eventually be a need for an abstract service solely confined to hospital research, the most immediate need is for more explicit interpretation of results of hospital researchers so that findings could be more readily adapted by the practitioner.

The annual outlay for hospital research from all sources needs to be increased. Neither the total volume, full range of subjects, nor complete monetary value of all ongoing hospital research is known. Some joint approach should be established for determining the magnitude of the annual expenditure on hospital research, irrespective of the source.

It has been estimated that not much more than $3 million is spent annually on hospital research. This is to be compared with a research expenditure in industry totaling some $6.5 billion annually. The aircraft industry alone, for example, spends $2.1 billion; the electric industry $1.2 billion. The total medical research expenditure is approximately $700 million annually. The pharmaceutical industry spends from 3 to 5 per cent of its total sales for research. In an area in which there is an annual expenditure of $8 billion on patient services and which has a capital investment of at least $8000 per bed, an annual expenditure of one-half of one per cent for research does not appear excessive. An expenditure of one-half of one per cent of the annual expenditure for hospital services would amount to approximately $40 million.

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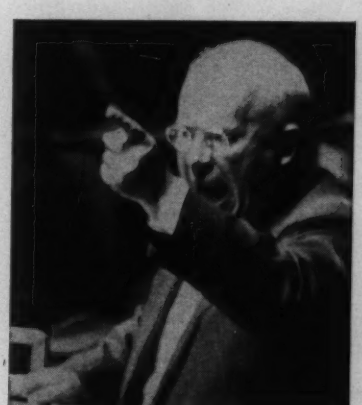

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MEDICAL RECORD LIBRARIAN wanted to assume full charge of record department in a newly built modern air conditioned 210 general bed hospital. Salary open, 40 hour week with benefits. Contact James Asher, Assistant Administrator, St. Joseph's Hospital, 923 Powell Street, St. Joseph, Missouri, Telephone Adams 4-0821.

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El Camino Hospital, Mountain View, California, opened September 1st, 1961, is continuing to accept applications for REGISTERED NURSES. El Camino Hospital, 307 beds, is located in the Mountain View-Los Altos-Sunnyvale area, 35 miles south of San Francisco and 10 miles north of San Jose. Excellent housing, apartments and homes available within one mile of the Hospital. There are four colleges in the vicinity. Temperate smog-free climate year around. Write Director of Personnel, El Camino Hospital, 2500 Grant Road, Mountain View, California.

STAFF NURSES: The Board of Public Assistance, operating three hospitals in Tampa, Florida, has openings for nurses. 40 hour week, attractive starting salary and liberal benefit program. Unusual opportunity for advancement and progress in nursing administration. Ideally located, living accommodations available. Apply Personnel Director, Board of Public Assistance, Tampa General Hospital, Tampa, Florida.

DIRECTOR OF MEDICAL INSTITUTIONS: (M.D.) Salary Range $20,400-24,792. Head 766-bed general hospital which is approved for internship and residency training. New $7 million addition opened two years ago. Five years' experience in hospital administration is required. For applications, write to Santa Clara County, Personnel Department, 70 West Rosa Street, San Jose 10, California. Final application date is February 1, 1962.

ANESTHETIST—Nurse; for 170 bed hospital; excellent personnel policies; 40-hour week; collegetown; living accommodations in nurses' home if requested. Apply Richard E. Cummings, Administrator, J. C. Blair Memorial Hospital, Huntingdon, Pennsylvania.

PHARMACIST, Chief for medical school Hospital in Chicago. Must be thoroughly experienced in all phases of administration of a large hospital pharmacy and licensed or eligible in the State of Illinois. Salary open with liberal fringe benefit program. Please state age, education, experience and salary requirements in first letter. Address HOSPITALS, BOX L-24.

EXECUTIVE HOUSEKEEPER: Progressive Up-state New York Hospital seeks man with 3 years experience to head well established housekeeping department. Liberal personnel benefits, salary to $6,000. Write stating experience and salary requirements to Personnel Director, Benedictine Hospital, Kingston, New York.

80 bed M. D. hospital opening February 1, 1962 need NURSES, DIETITIAN and REGISTERED MEDICAL LIBRARIAN. Excellent salaries and fringe benefits. Apply Administrator, 22141 Roscoe Blvd., Canoga Park, California.

PERSONNEL DIRECTOR for 300 bed hospital to be associated with Administrator in a Staff Capacity. Would be responsible to Administrator for expanding present personnel activity and further developing the department. Hospital experience desirable. Salary comensurate with training and experience. Address HOSPITALS, Box L-31.

STAFF DIETITIAN: Excellent opportunity for Therapeutic Dietitian in 500 bed hospital, with intern resident program, school of nursing, salary open, commensurate with background, liberal benefit program. Apply Personnel Department, Christ Hospital, 2139 Auburn Avenue, Cincinnati, Ohio.

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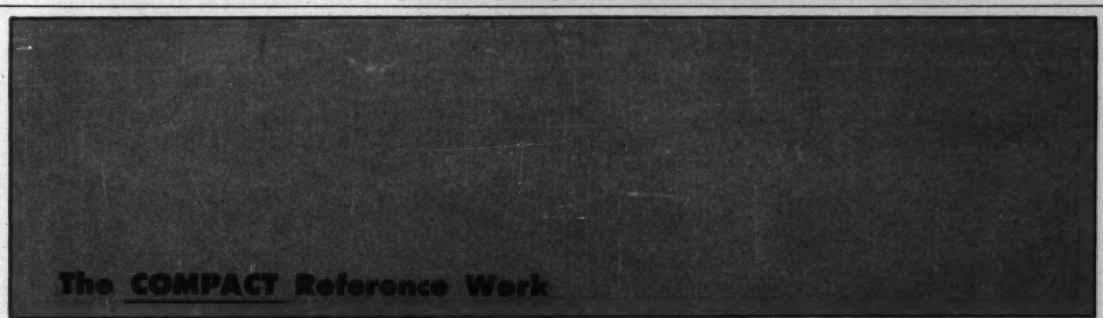

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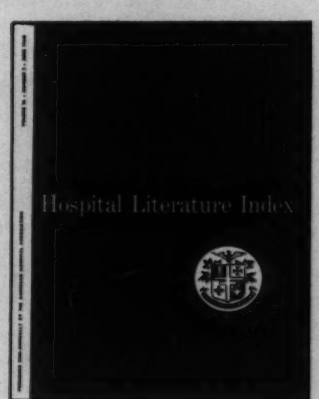

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